RICOH

RICOH FT6645/6655/6665
(A095/A096/A097)

2nd Edition May 1994

RICOH COMPANY, LTD.

PARTS CATALOG

INTRODUCTION

This chapter instructs you the numbers and names of this parts on this machine.

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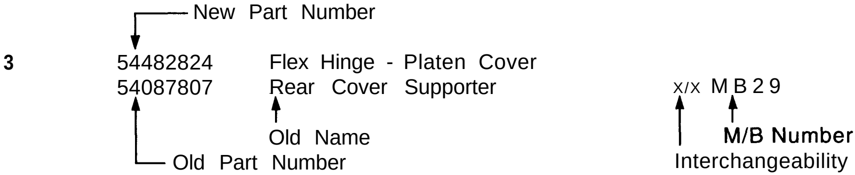
FT6645/FT6655/FT6665	**(A095/A096/A097)**
DF60	**(A376)**
ST25	**(A377)**
DH400	**(A378)**
SR400	**(A379)**
RT31	**(A380)**
ST24	**(A374)**

1) If a part is modified and the interchangeability is not o/o, the old part number is not removed from the parts catalog, but is listed below the new part number.

. If the part name changes, the old name, interchangeability and M/B number are listed in the description section beside the old part number.

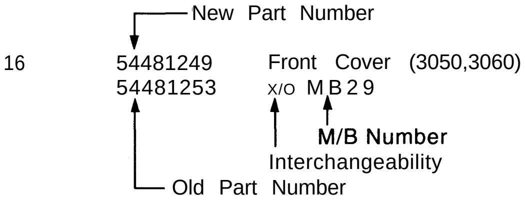


New Part Number

3 54482824 Flex Hinge - Platen Cover
54087807 Rear Cover Supporter X/X MB29

Old Name
M/B Number
Old Part Number
Interchangeability

. If the name does not change, only the interchangeability and M/B number are shown.



New Part Number

16 54481249 Front Cover (3050,3060)
54481253 X/O MB29

M/B Number
Interchangeability
Old Part Number

2) **If a new part is added, the M/B number is printed in the description section under the name.**

Newly added part number

49 54475510 Toner Overflow Sensor

MB35 (ADDED)

M/B Number

3) **When a part is no longer used, the M/B number is printed in the description section beside the part name.**

40 54241937 **Shaft-Platen Cover** **MB29 (OBS)**

FT6645/6655/6665
(A095/A096/A097)

This parts catalog includes MB No. 1 to MB No. 24 (A095/A096).

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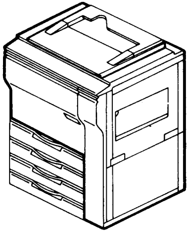
LOCATION OF UNIT

1. **EXTERIOR (A095/A096/A097)**



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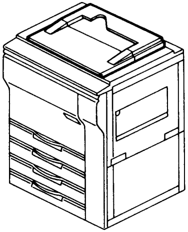
2. **PLATEN COVER (A095/A096/A097)**



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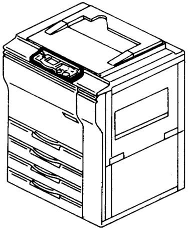
3. OPERATION PANEL ASS'Y (A095/A096/A097)



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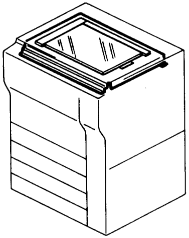
4. OPTICS SECTION 1 (A095/A096/A097)



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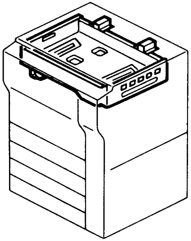
5. **OPTICS SECTION 2 (A095/A096/A097)**



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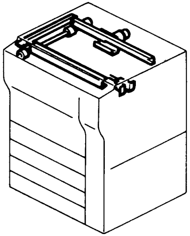
6. **OPTICS SECTION 3 (A095/A096/A097)**



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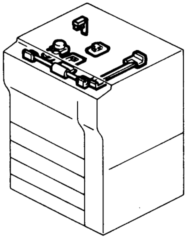
7. OPTICS SECTION 4 (A095/A096/A097)



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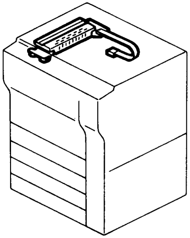
8. OPTICS SECTION 5 (A095/A096/A097)



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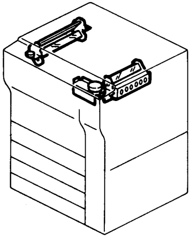
9. OPTICS SECTION 6 (A095/A096/A097)



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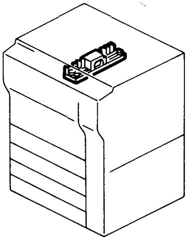
10. OPTICS SECTION 7 (A095/A096/A097)



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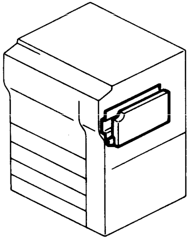
11. BY-PASS FEED TABLE (A095/A096/A097)



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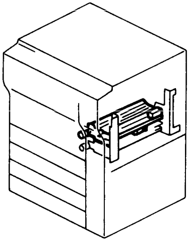
12. PAPER REGISTRATION 1 (A095/A096/A097)



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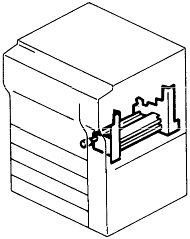
13. PAPER REGISTRATION 2 (A095/A096/A097)



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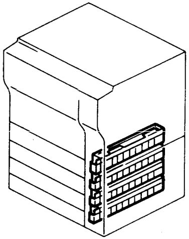
14. PAPER FEED SECTION (A095/A096/A097)



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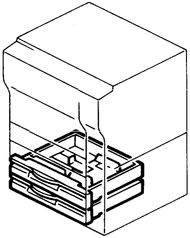
15. PAPER TRAY SECTION 1 (A095/A096/A097)



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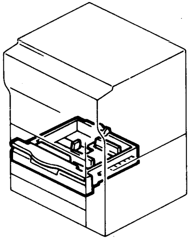
16. PAPER TRAY SECTION 2 (A095/A096/A097)



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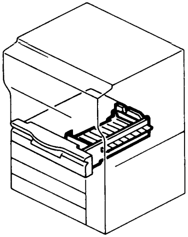
17. TANDEM TRAY 1 (A095/A096/A097)



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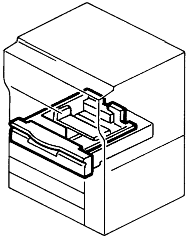
18. TANDEM TRAY 2 (A095/A096/A097)



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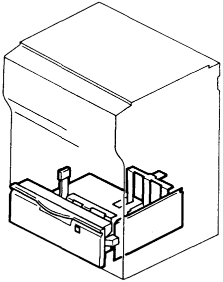
19. **LCT TRAY 1 (A095/A096/A097)**



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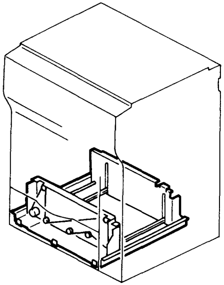
20. **LCT TRAY 2 (A095/A096/A097)**



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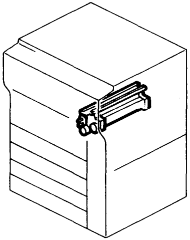
21. **DEVELOPMENT UNIT (A095/A096/A097)**



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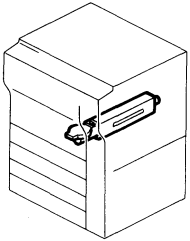
22. **TONER HOPPER SECTION (A095/A096/A097)**



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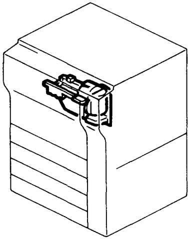
23. **TONER BOTTLE HOLDER SECTION (A095/A096/A097)**



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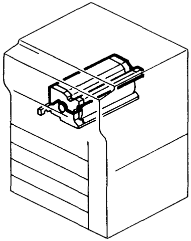
24. **DRUM UNIT 1 (A095/A096/A097)**



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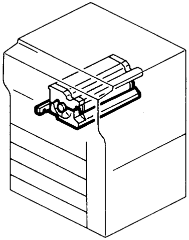
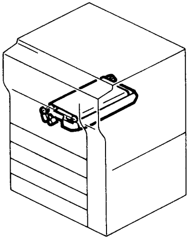
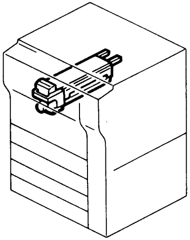
25. DRUM UNIT 2 (A095/A096/A097)	26. TRANSFER SECTION (A095/A096/A097)	27. FUSING UNIT 1 (A095/A096/A097)
		
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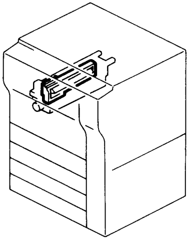
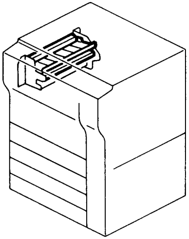
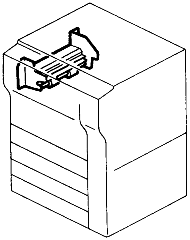
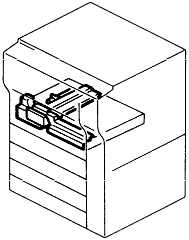
28. FUSING UNIT 2 (A095/A096/A097)	**29. INVERTER SECTION 1 (A095/A096/A097)**	**30. INVERTER SECTION 2 (A095/A096/A097)**
		
See Page 66	See Page 68	See Page 70

LOCATION OF UNIT

31. DUPLEX UNIT 1 (A095/A096/A097)



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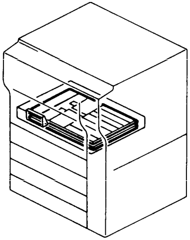
32. DUPLEX UNIT 2 (A095/A096/A097)



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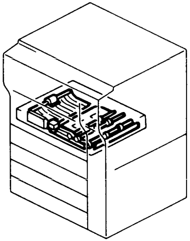
33. DUPLEX UNIT 3 (A095/A096/A097)



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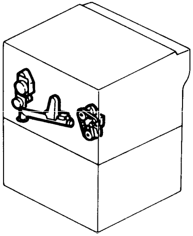
34. DRIVE SECTION 1 (A095/A096/A097)



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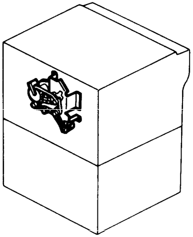
35. DRIVE SECTION 2 (A095/A096/A097)



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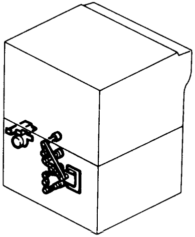
36. DRIVE SECTION 3 (A095/A096/A097)



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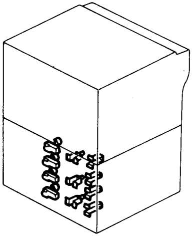
37. **DRIVE SECTION 4 (A095/A096/A097)**



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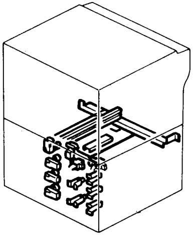
38. **DRIVE SECTION 5 (A095/A096/A097)**



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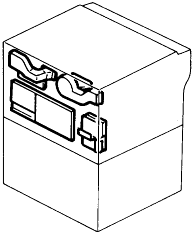
39. ELECTRICAL SECTION 1 (A095/A096/A097)



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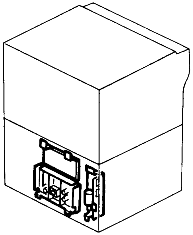
40. ELECTRICAL SECTION 2 (A095/A096/A097)



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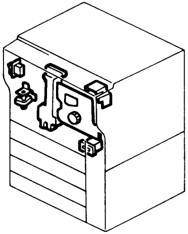
41. ELECTRICAL SECTION 3 (A095/A096/A097)



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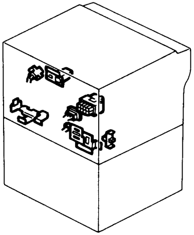
42. ELECTRICAL SECTION 4 (A095/A096/A097)



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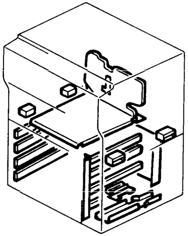
LOCATION OF UNIT

43. FRAME SECTION 1 (A095/A096/A097)



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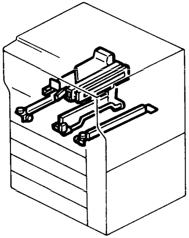
44. FRAME SECTION 2 (A095/A096/A097)



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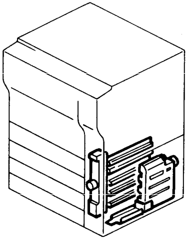
45. FRAME SECTION 3 (A095/A096/A097)



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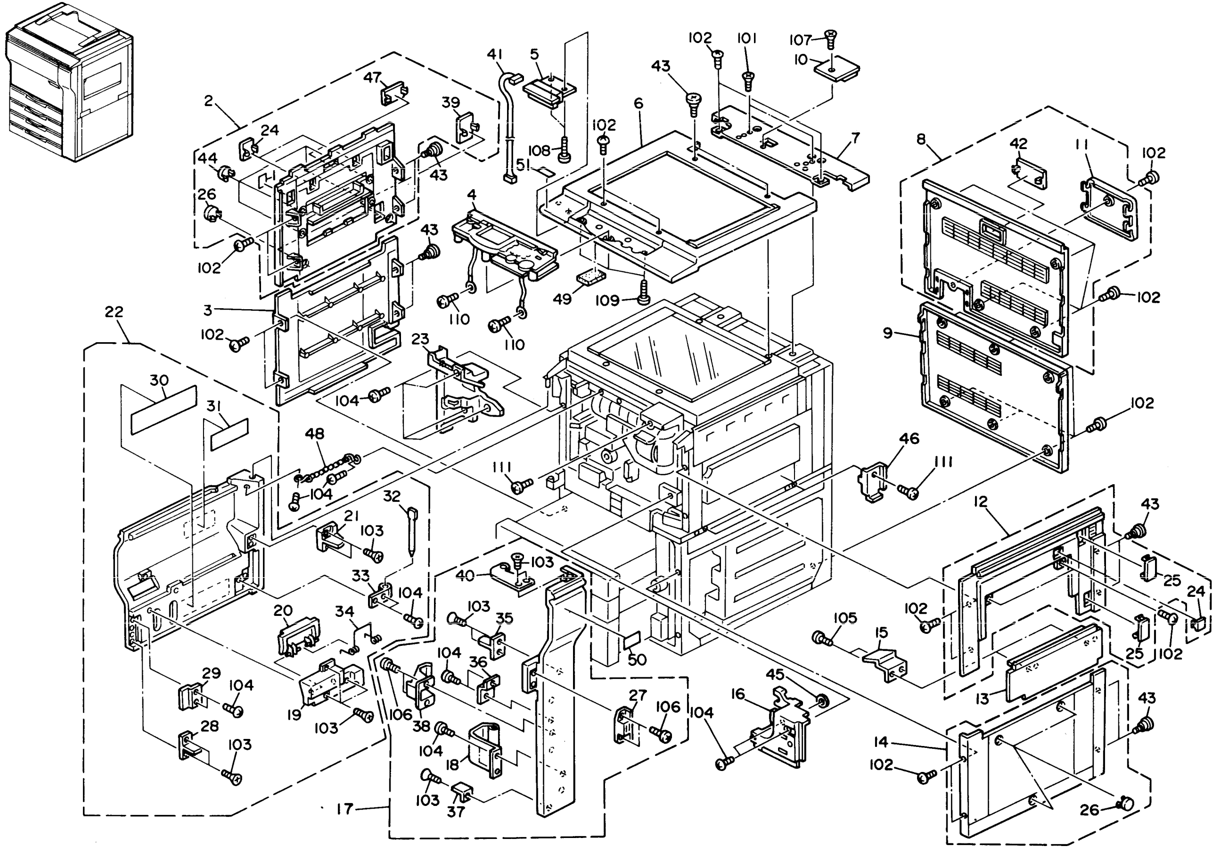
1. EXTERIOR (A095/A096/A097)



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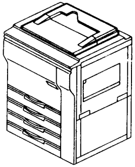
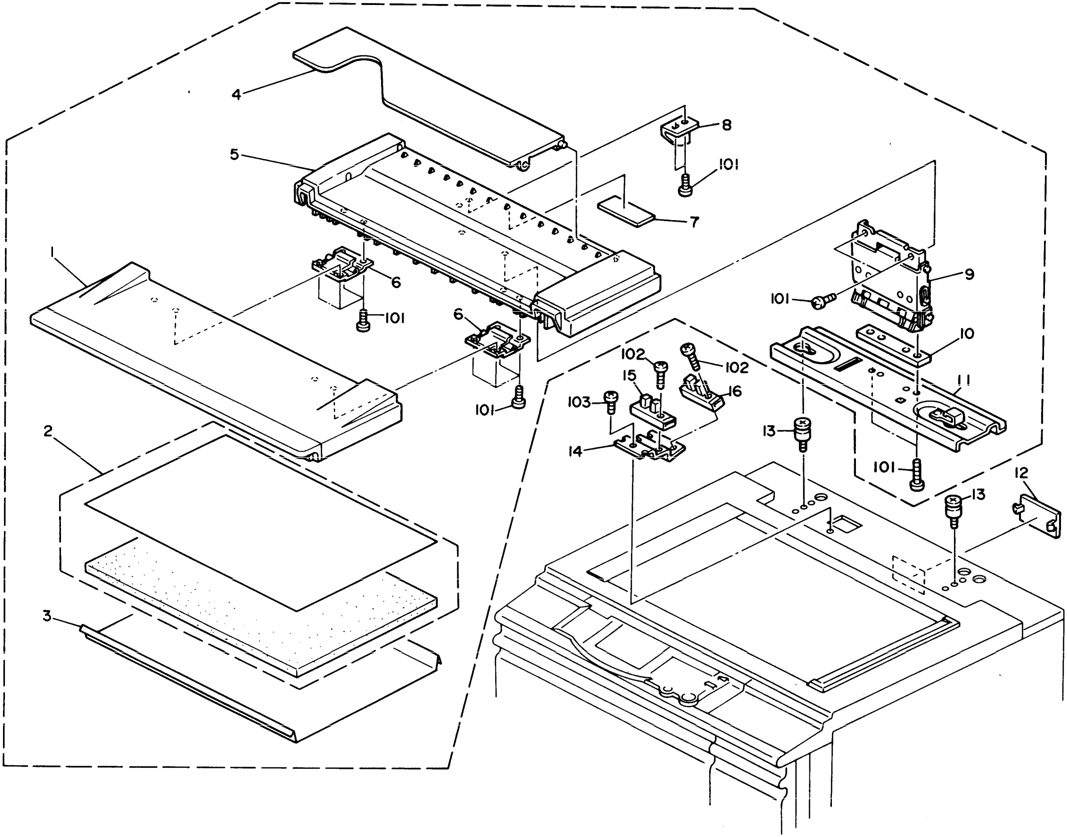
1. EXTERIOR (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1300	Decal - Main Switch	1
2	A096 1294	Upper Left Cover	1
3	A096 1302	Lower Left Cover	1
4	A096 1461	Operation Panel Ass'y - LT	1
4	A096 1462	Operation Panel Ass'y - A4	1
5	A096 5310	Auto Response Sensor	1
6	A096 1286	Top Cover	1
7	A096 1281	Rear Top Cover	1
8	A095 1360	Upper Rear Cover	1
9	A096 1364	Lower Rear Cover	1
10	A096 1282	Position Sensor Cap	1
11	A096 1362	Connector Cover	1
12	A096 1305	Upper Right Cover	1
13	A096 1308	Middle Right Cover	1
14	A096 1315	Lower Right Cover	1
15	A096 1309	Spring Plate	2
16	A096 1371	Inner Cover - Door Switch	1
17	A095 1368	Right Door (A095)	1
17	A096 1368	Right Door (A096)	1
17	A097 1368	Right Door (A097)	1
18	A096 1345	Lower Right Hinge	1
19	A096 1324	Grip Inner Cover	1
20	A096 1323	Grip Cover	1
21	A096 1328	Duplex Guide Lever	1
22	A096 1320	Left Door	1
23	A096 1376	Inner Cover - Main Switch	1
24	A096 1298	Cap - MAT20	3
25	A096 1317	Cap - 34x55	2
26	A024 1367	Small Cap - Left Cover	5
27	AG07 0004	Magnetic Catch	1
28	A096 1325	Left Switch Lever	1
29	A096 1327	Magnet Catch Plate'	1
30	A096 1338	Decal - Misfeed Removal	1
31	A096 1339	Decal - Add Toner	1
32	A096 1337	Hinge Shaft - Lower Left	1

Index No.	Part No.	Description	Q'ty Per Assembly
33	A096 1326	Lower Left Hinge	1
34	AA06 6110	Grip Spring	1
35	A096 1343	Upper Switch Lever	1
36	A096 1349	Magnet Catch Plate	1
37	A096 1348	Lower Switch Lever	1
38	A096 1367	Right Guide Lever	1
39	A007 6156	Lower Rear Cap	1
40	A096 1344	Upper Right Hinge	1
41	A096 5409	ARS Harness	1
42	A095 1363	Cap - 38x77	1
43	AA14 3416	Steped Screw - M4x3	8
44	A096 1299	Cap - M22	4
45	AA10 0006	Flat Nut - 3.6x9.5x0.8	1
46	A096 1313	Cover Bracket	2
47	A096 1297	Mirror Clamp Cover	1
48	A096 1377	Left Door Stoper	1
49	AA15 1862	Bottle Shield	1
50	A509 0010	Key Counter Holder Ass'y MB3 (ADDED) MB24 (OBS)	
51	A096 9520	Editing Sheet - A4 MB3 (ADDED)	1
51	A096 9521	Editing Sheet - LT MB3 (ADDED)	1
101	0972 4006W	Philips Polycarbonate Screw - M4x6	
102	0802 5094	Tapping Truss Head Screw - M4x8	
103	0802 5124	Tapping Screw - M3x8	
104	0344 0080W	Philips Truss Head Screw - M4x8	
105	0414 0082W	Tapping Screw With Flat Washer-M4x8	
106	0434 0082W	Tapping Screw - M4x8	
107	0324 0080W	Philips Sunken Head Screw - M4x8	
108	0414 0082B	Binding Self Tapping Screw - M4x8	
109	0951 4016W	Philips Screw W/Flat Washer-M4x16	
110	0801 1185	Philips Truss Head Screw - M4x8	
111	0434 0080B	Philips Tapping Screw - M4x8	

2. PLATEN COVER (A095/A096/A097)





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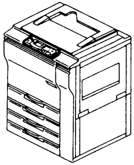
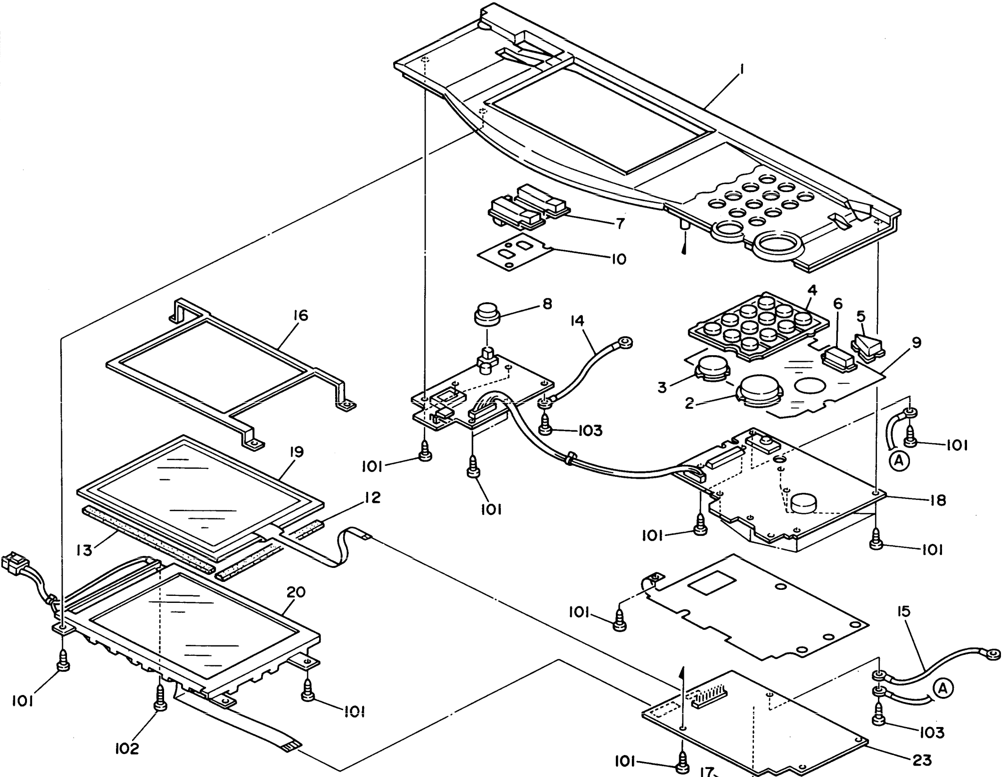
2. PLATEN COVER (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A100 1321	Front Platen Cover	1
2	AA16 2053	Platen Cover Pad	1
3	A406 9505	Platen Cover Sheet - 10Sheet/1 Set	1
4	A100 1323	Original Holder	1
5	A100 1322	Rear Platen Cover	1
6	A053 1957	Flex Hinge - Platen Cover	2
7	5215 2838	Rubber Magnet	1
8	A100 1324	Positioning Sensor Shutter	1
9	A100 1310	Platen Cover Hinge Ass'y	1
10	A100 1325	Hinge Spacer	1
11	A095 1394	Mounting Bracket - Platen Cover	1
12	A095 1363	Cap - 38x77	1
13	5215 1667	Platen Cover Stud	2
14	A095 1391	Positioning Sensor Bracket	1
15	AW02 0067	Photointerrupter - EESX4019 - P15	1
16	AW02 0062	Photointerrupter - EESX4019 - P15	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0414 0142W	Tapping Screw - M4x14	
102	0314 0100W	Philips Pan Head Screw - M4x10	
103	0344 0080W	Philips Truss Head Screw - M4x8	

3. OPERATION PANEL ASS'Y (A095/A096/A097)

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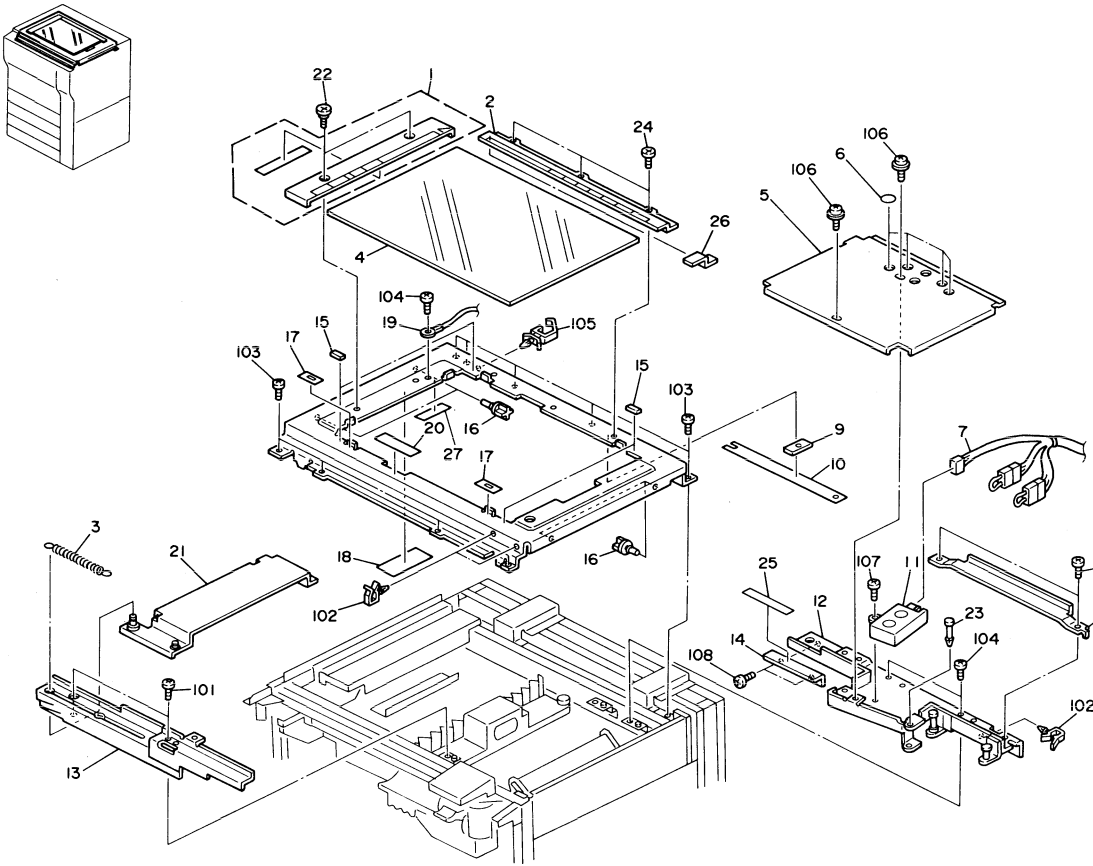
3. OPERATION PANEL ASS'Y (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 1461	Operation Panel Ass'y - LT	1
*	A096 1462	Operation Panel Ass'y - A4	1
1	A096 1487	Operation Panel Case - A4	1
1	A096 1486	Operation Panel Case - LT	1
2	A096 1491	Keytop - Start	1
3	A096 1492	Keytop - C/S	1
4	A096 1493	Keytop - Set 1	1
5	A096 1494	Keytop - Interrupt	1
6	A096 1498	Keytop - Mode Clear	1
7	A096 1496	Keytop - Set 2	1
8	A096 1497	LCD Display Dial	1
9	A096 1506	Right Keytop Sheet	1
10	A096 1507	Left Keytop Sheet	1
11	A096 1508	Grounding Plate	1
12	A096 1509	Cushion -1	2
13	A096 1510	Cushion -2	2
14	A096 1511	Grounding Harness -1	2
15	A096 1521	Grounding Harness -2	1
	A096 1512	x/o MB1	
16	A096 1513	LCD Display Sheet	1
17	A096 7711	IC - AM27C4096-150DC (ASIA)	1
17	A096 7701	IC-AM27C4096-150DC (115V)	1
18	A096 1518	Key Board - 220/230V	1
18	A096 1517	Key Board - 115V	1
19	AW50 0016	Touch Panel	1
20	AX30 0001	LCD Display	1
21	A096 7712	IC - AM27C1024-150DC (ASIA)	1
21	A096 7702	IC-AM27C1024-150DC (115V)	1
22	A096 7714	IC - AM27C010-150DC (ASIA)	1
22	A096 7704	IC-AM27C010-150DC(115V)	1
23	A096 7571	Operation Panel Board - 220/230V	1
23	A096 7570	Operation Panel Board (ASIA)	1
23	A096 7560	Operation Panel Board - 115V	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0432 0060B	Philips Tapping Screw - M2x6	
102	0432 0100B	Philips Tapping Screw - M2x10	
103	0432 0080B	Philips Tapping Screw - M2x8	

4. OPTICS SECTION 1 (A095/A096/A097)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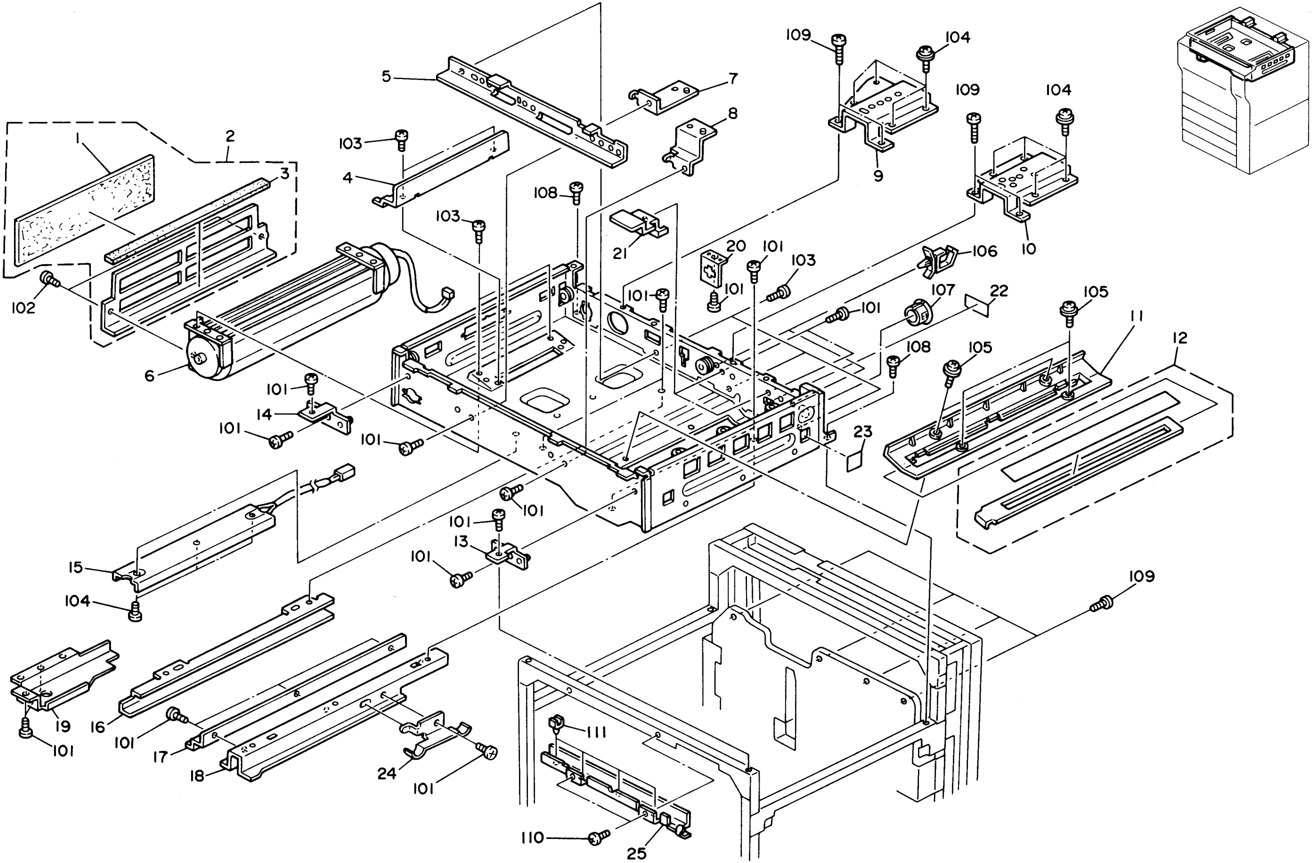
4. OPTICS SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1901	Left Scale - A4	1
	A096 1741	x/o MB1	
1	A096 1904	Left Scale - LT	1
	A096 1742	x/o MB1	
2	AC04 2072	Rear Scale - A4	1
2	AC04 2076	Rear Scale - LT	1
3	AA06 0519	Tension Spring - 62mm	1
4	AC01 2034	Exposure Glass (A095)	1
4	AC01 2035	Exposure Glass (A096)	1
5	A096 1825	Main Optics Cover	1
6	AA15 0305	Seal - 20mm	4
7	A096 5472	Optics Harness	1
8	A096 1874	Harness Guide Plate	1
9	A096 1736	Cushion -1x13x41	1
10	A096 1738	Seal - 0.05x26x285	1
	A096 1737	x/o MB16	
11	AW01 0033	Original Sensor Asss'y - H =3-50	1
12	A096 1842	Rear Optics Cover	1
13	A096 1832	Front Optics Cover	1
14	A096 1848	Cover Guide Plate	1
15	A007 1920	Cushion - Exposure Glass	4
16	AA16 1076	Scanner Stopper	4
17	AA15 0628	Seal - 0.19x15x34	2
18	A096 1735	VD/ADS Pattern	1
19	AW10 0022	Optics Thermistor	1
20	AA15 0629	Seal - 0.19x28x108	1
21	A096 1821	2nd Optics Cover	1
22	AA14 3416	Stepped Screw - M4x3	2
23	AA13 2163	Idler Shaft	1
24	AA14 3417	Shoulder Screw - M4x4	3
25	AA15 2229	Seal - 9x114	1
26	A096 1749	Grounding Plate	1
27	A096 1739	Small VL Pattern MB21 (ADDED)	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060W	Philips Pan Head Screw - M4x6	
102	1105 0267	Wire Clamp	
103	0434 0060B	Philips Tapping Screw - M4x6	
104	0314 0040W	Philips Pan Head Screw - M4x4	
105	1105 0278	Harness Clamp	
106	0951 4006W	Philips Screw With Flat Washer-M4x6	
107	0313 0050W	Philips Pan Head Screw - M3x5	
108	0323 0050W	Philips Sunken Head Screw - M3x5	

5. OPTICS SECTION 2 (A095/A096/A097)



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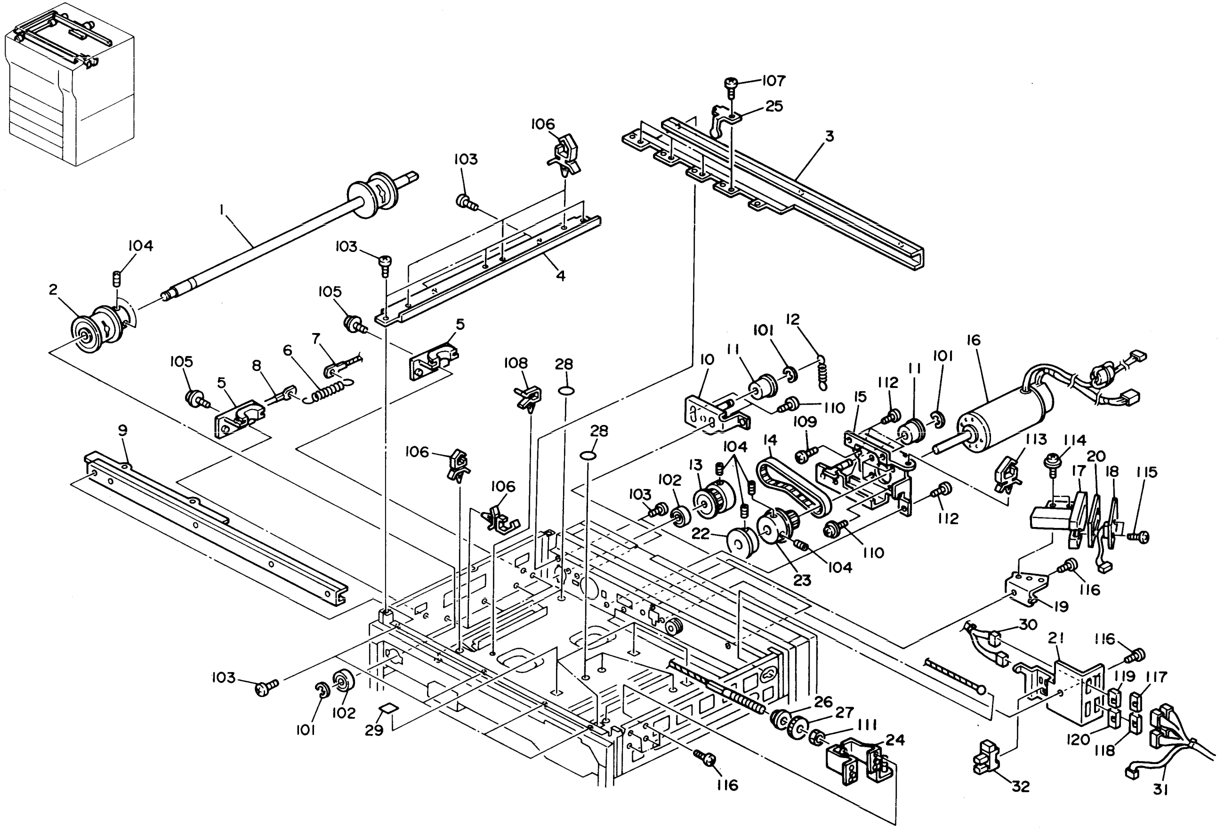
5. OPTICS SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AA01 2073	Filter	1
	AA01 2061	o/o MB5	
2	A097 1727	Cooling Fan Filter	1
	A096 1725	o/o MB5	
3	AA15 1816	Seal - 5x14x212	1
4	A096 1727	Guide Plate	1
5	A096 1819	3rd Scanner Guide	1
6	AX65 0013	Optics Cooling Fan	1
7	A096 1828	Cover Angle - Front Left	1
8	A096 1827	Cover Angle - Front Right	1
9	A096 1290	Left Support Bracket - ADF	1
10	A096 1291	Right Support Bracket - ADF	1
11	A096 1994	Filter Holder	1
12	A096 1995	Filter	1
13	A096 1713	Front Right Angle	1
14	A096 1714	Front Left Angle	1
15	AX40 0048	Anticondensation Heater - 15W 220/230V	1
15	AX40 0047	Anticondensation Heater - 15W115V	1
16	A096 1678	Left Rail - Drum Unit	1
17	A096 1677	Right Rail - Drum Unit	1
18	A096 1676	Development Unit Rail	1
19	A096 1716	Optics Heater Cover	1
20	A096 1715	Optics Heater Bracket	1
21	A096 1829	Cover Rear Angle	2
22	AA15 0333	Seal - 0.19x14x74	1
23	AA15 0334	Seal -0.19x40x48	1
24	A096 1679	Development Grounding Plate	1
25	A096 5536	ARS Harness Cover	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0060W	Tapping Screw - M4x6	
102	0951 3005W	Philips Screw With Flat Washer-M3x5	
103	0314 0060W	Philips Pan Head Screw - M4x6	
104	0314 0040W	Philips Pan Head Screw - M4x4	
105	0951 4008W	Philips Screw With Flat Washer-M4x8	
106	1105 0278	Harness Clamp	
107	1106 0459	Bushing - 20.2mm	
108	0434 0060B	Philips Tapping Screw - M4x6	
109	0434 0080W	Tapping Screw - M4x8	
110	0434 0080B	Philips Tapping Screw - M4x8	
111	1105 0199	Clamp	

6. OPTICS SECTION 3 (A095/A096/A097)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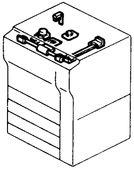
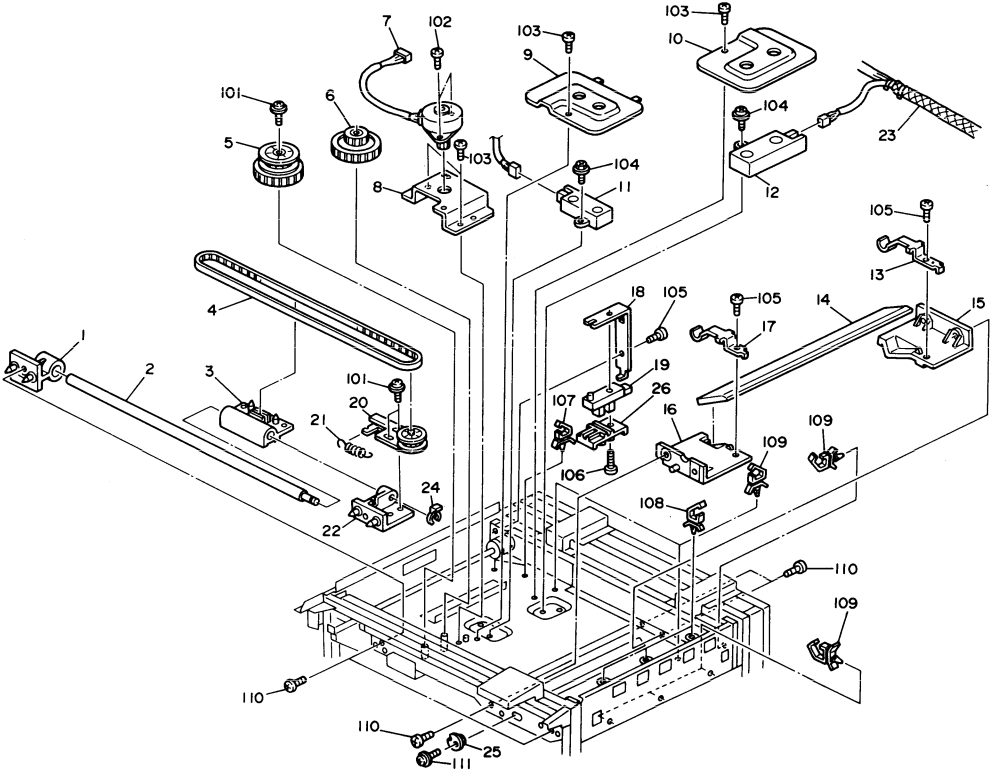
6. OPTICS SECTION 3 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1921	Scanner Drive Shaft	1
2	A096 1925	Front Wire Pulley	1
3	A096 1682	Rear Scanner Guide	1
4	A096 1729	Left Harness Guide	1
5	A096 1687	Wire Guide	2
6	AA06 0386	Pressure Spring	1
7	AA05 0078	Rear Scanner Drive Wire	1
8	AA05 0077	Front Scanner Drive Wire	1
9	A096 1680	Front Scanner Guide	1
10	A096 1940	Tension Bracket	1
11	AB03 0425	Belt Tension Pulley	2
12	AA06 0530	Belt Tension Spring - 29.3mm	1
13	AB03 0424	Timing Pulley - 40Z	1
14	AA04 3227	Timing Belt -	1
15	A096 1934	Motor Bracket	1
16	AX07 0008	DC Motor - 53W	1
17	A096 1692	ADS Case	1
18	A096 5230	ADS Board	1
19	A096 1694	ADS Bracket - A4 (A095)	1
19	A096 1695	ADS Bracket (A096)	1
20	A096 1693	ADS Cover	1
21	A096 1816	Sensor Bracket - Lens Position	1
22	A096 1939	Timing Pulley Ring	1
23	AB03 0450	Timing Pulley - 24Z	1
24	A096 1927	Front Wire Bracket	1
25	A096 1876	Harness Clamp	4
26	5446 1865	Bushing - 5x9x5.5mm	1
27	AA10 1010	Plate Nut - M5	1
28	5205 1853	Mylar Seal - Base	4
29	AA15 0332	Seal -0.19x18x22	4
30	A096 5474	Platen Cover Harness	1
31	A096 5473	Outer Optics Harness	1
32	AW02 0056	Photointerrupter - EE-SX4235A-P1	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0060E	Retaining Ring - M6	
102	0805 3341	Ball Bearing - 10x22x6	
103	0434 0060W	Tapping Screw - M4x6	
104	0574 0050W	Hexagon Headless Set Screw - M4x5	
105	0960 4006W	Philips Flange Screw - M4x6	
106	1105 0278	Harness Clamp	
107	0313 0050W	Philips Pan Head Screw - M3x5	
108	1105 0087	Clamp	
109	0434 0080W	Tapping Screw - M4x8	
110	0951 4008B	Philips Screw With Washer - M4x8	
111	0710 0050W	Hexagon Nut - M5	
112	0434 0060B	Philips Tapping Screw - M4x6	
113	1105 0291	Wire Saddle	
114	0951 3005W	Philips Screw With Fiat Washer-M3x5	
115	0413 0062W	Tapping Screw - M3x6	
116	0314 006W	Philips Pan Head Screw - M4x6	
117	1102 6245	Connector - 2P	
118	1102 6274	Connector - Yellow 3P	
119	1102 6260	Connector - Red 3P	
120	1102 6247	Connector - 4P	

7. OPTICS SECTION 4 (A095/A096/A097)

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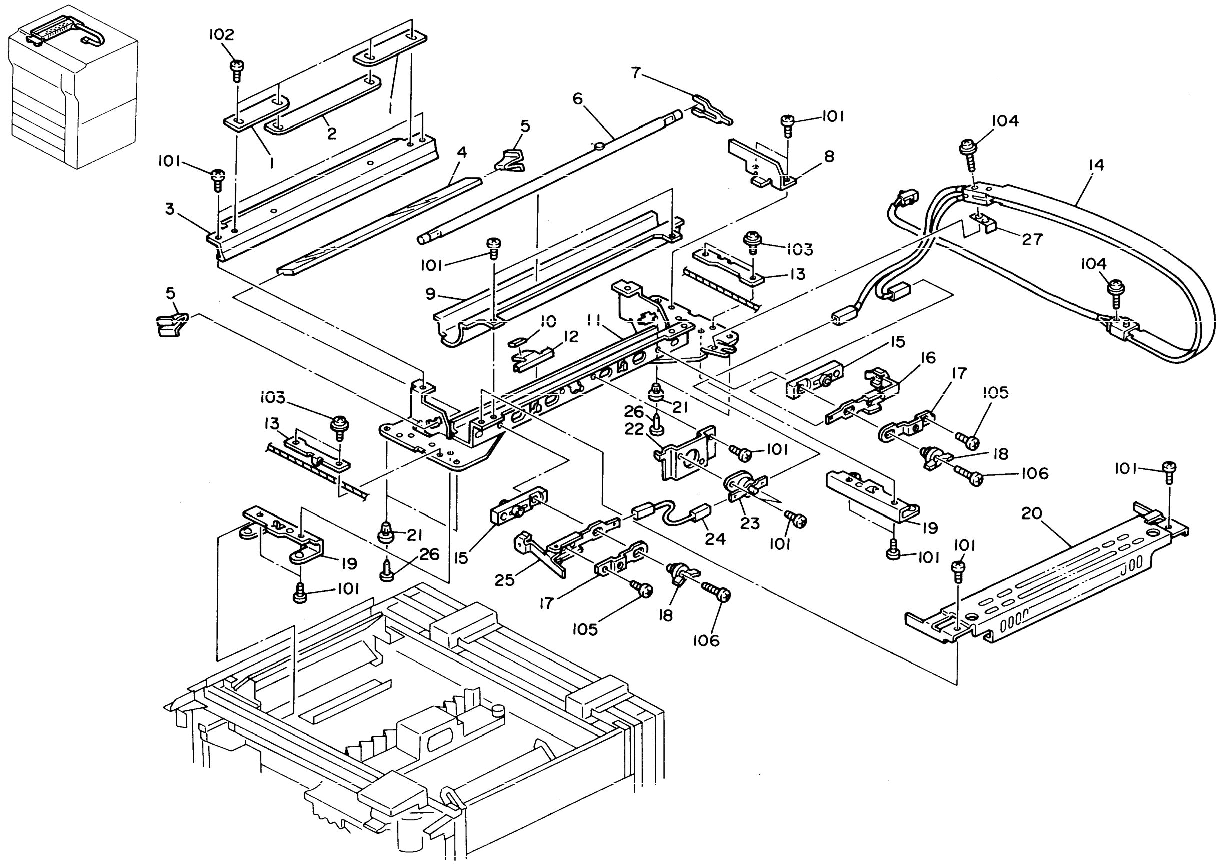
7. OPTICS SECTION 4 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1802	Left Holder - X	1
2	AC05 1013	Lens Guide Rod - X	1
3	A096 1801	Lens Slider - X	1
4	AA04 3219	Timing Belt - B40S2M1066	1
5	AB01 7299	Pulley - 77Z	1
6	AB01 7284	Gear - 34/68Z	1
7	AX05 0063	Stepping Motor -11W	1
8	A096 1811	Motor Bracket	1
9	A096 1717	Front Sensor Cover	1
10	A096 1718	Rear Sensor Cover - A4	1
10	A096 1719	Rear Sensor Cover - LT	1
11	AW01 0035	Original Sensor Ass'y - H =3-125	1
12	AW01 0038	Original Sensor Ass'y - H = 125 (LT)	1
12	AW01 0035	Original Sensor Ass'y - H = 3-125 (A4)	1
13	AC03 5050	Rear Spring Plate - 6th	1
14	AC03 0094	6th Mirror	1
15	A096 1992	Rear 6th Mirror Holder	1
16	A096 1991	Front 6th Mirror Holder	1
17	AC03 5049	Front Spring Plate - 6th	1
18	A096 1689	Scanner Sensor Bracket	1
19	AW02 0061	Photointerrupter - EE - SX4019-P1	1
20	A096 1807	Lens Driver Pulley - X	1
21	AA06 0514	Tension Spring -21.5mm	1
22	A096 1804	Right Holder - X	1
23	A096 7633	Lower Optics Harness - 115V	1
23	A096 5471	Lower Optics Harness - 230V	1
24	AA10 0007	Ring - 7x13x5.5	1
25	5205 1694	Adjusting Cam - Start Lever	1
26	A079 1693	Guide Feeler	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0951 4006W	Philips Screw With Flat Washer-M4x6	
102	0313 0050W	Philips Pan Head Screw - M3x5	
103	0434 0060W	Tapping Screw - M4x6	
104	0433 0060W	Tapping Screw - M3x6	
105	0314 0060W	Philips Pan Head Screw - M4x6	
106	0314 0120W	Philips Pan Head Screw - M4x12	
107	1105 0292	Wire Saddle	
108	1105 0291	Wire Saddle	
109	1105 0278	Harness Clamp	
110	0414 0082W	Tapping Screw With Flat Washer-M4x8	
111	0951 4008W	Philips Screw With Flat Washer-M4x8	

8. OPTICS SECTION 5 (A095/A096/A097)



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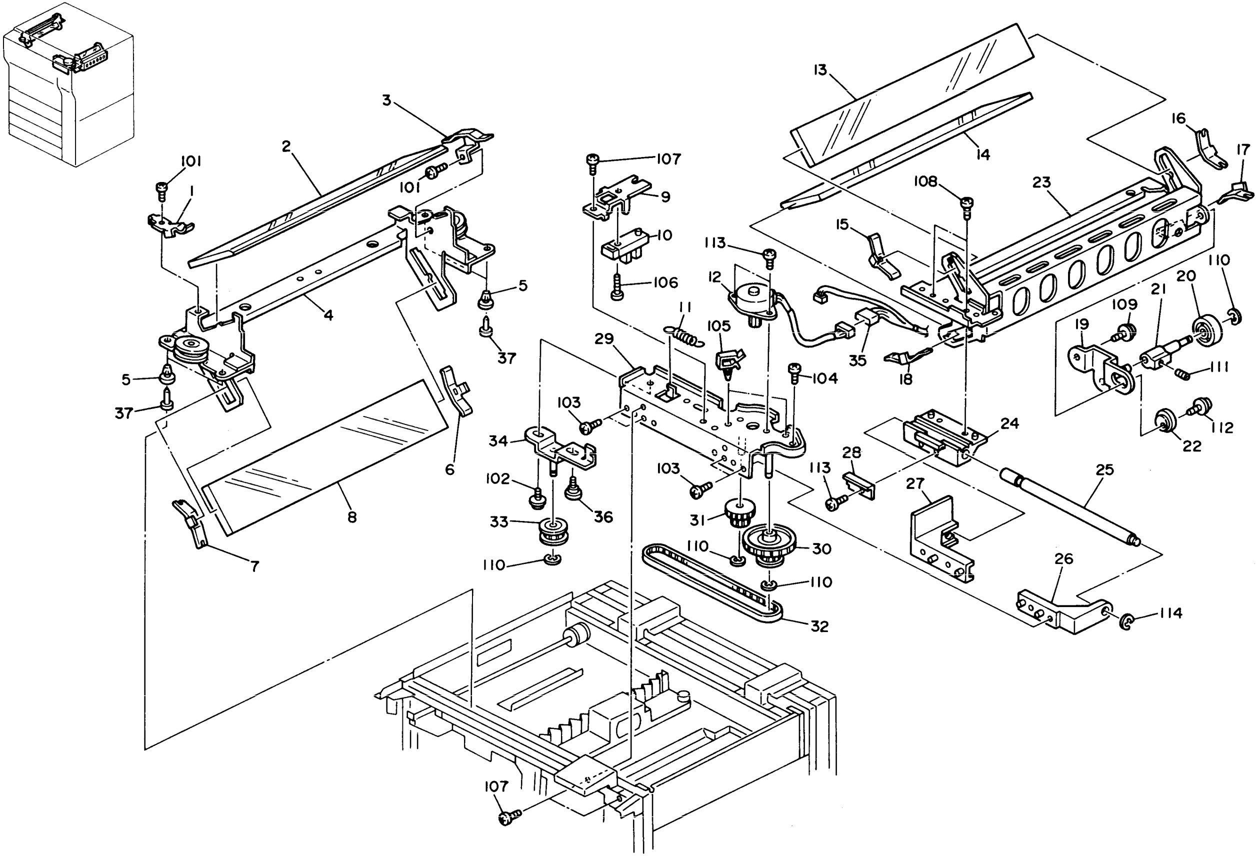
8. OPTICS SECTION 5 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A027 1769	Exposure Adjusting Plate - Side	2
2	A069 1855	Exposure Adjusting Plate - Center	1
3	A096 1866	Sub-reflector	1
4	AC03 0089	1st Mirror	1
5	A048 1721	Spring Plate A	2
6	AX52 0018	Exposure Lamp - 220/230V (A095/A096)	1
6	AX52 0022	Exposure Lamp - 220/230V (A097)	1
6	AX52 0016	Exposure Lamp - 115V	1
7	5215 1702	Clip - Exposure Lamp	1
8	A097 1860	1st Scanner Position Bracket	1
	A096 1857	x/o MB2	
9	A096 1861	Main Reflector	1
10	A096 1879	1st Mirror Cushion	1
11	A096 1855	1st Scanner Bracket	1
12	A096 1878	1st Mirror Support Plate	1
13	A096 1859	Wire Clamp	2
14	A096 5477	Exposure Lamp Harness	1
15	A096 1862	Lamp Terminal Insurator	2
	A096 1856	o/o MB5	
16	5215 1700	Exposure Lamp Terminal - Fix	1
17	5420 1682	Supporter - Lamp Terminal	2
18	A007 1868	Spacer - Lamp Terminal	2
19	A096 1858	1st Scanner Holder	2
20	A096 1865	Reflector Cover	1
21	A069 1883	Shoe - Scanner	4
	A069 1854	Bushing - 5mm o/o MB6	
22	A096 1871	Thermostat Holder	1
23	AW11 0011	Thermostat 140°C AC120V 15A	1
24	A096 5476	Exposure Support Harness	1
25	5442 1705	Exposure Lamp Terminal - Release	1
26	A096 1873	Scanner Shoe Pin	4
27	A096 1875	Guard Sheet	1
		MB16 (ADDED)	

Index No.	Part No.	Description	Q'ty Per Assembly
101	0313 0050W	Philips Pan Head Screw - M3x5	
102	0353 0040W	Philips Pan Head Bind Screw - M3x4	
103	0951 4006W	Philips Screw With Flat Washer-M4x6	
104	0951 3012W	Philips Screw With Flat Washer-M3x1	
105	0313 0080W	Philips Pan Head Screw - M3x8	
106	0313 0120W	Philips Pan Head Screw - M3x12	

9. OPTICS SECTION 6 (A095/A096/A097)



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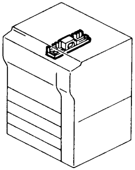
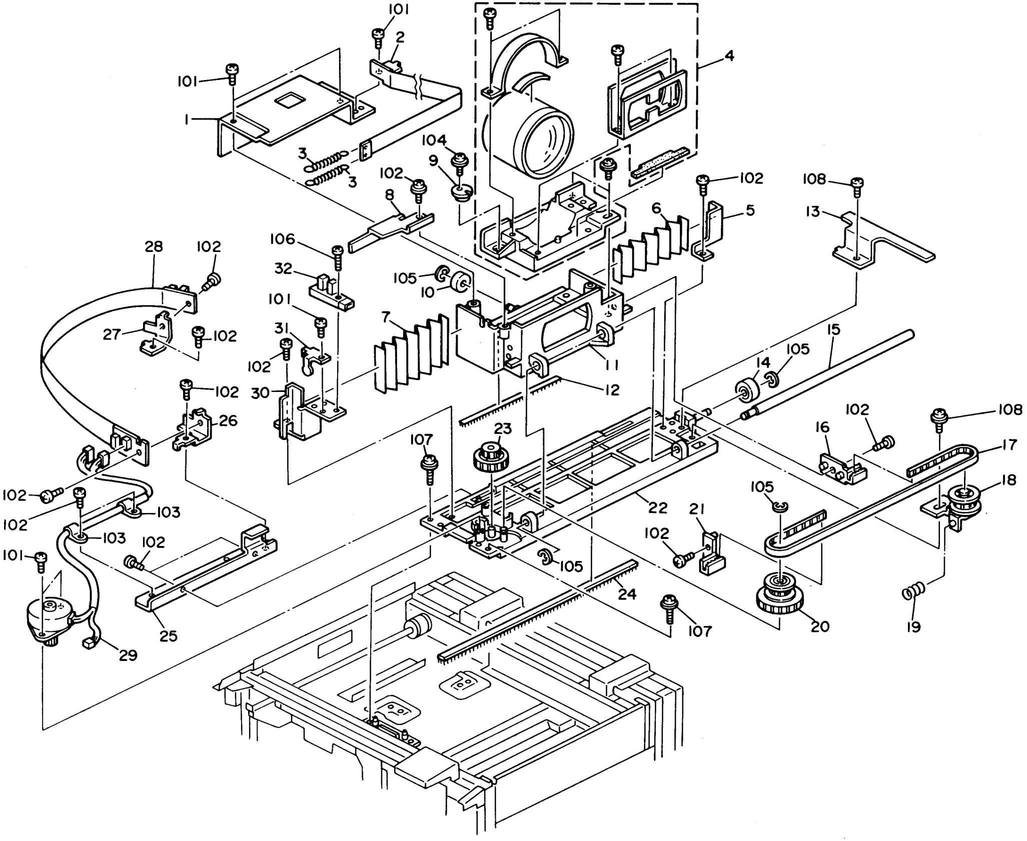
9. OPTICS SECTION 6 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AC03 5041	Front Spring Plate - 2nd	1
2	AC03 0090	2nd Mirror	1
3	AC03 5042	Rear Spring Plate - 2nd	1
4	A096 1891	2nd Scanner Bracket	1
5	A069 1883	Shoe-Scanner	4
	A069 1854	Bushing-5mm o/o MB6	
6	AC03 5044	Rear Spring Plate - 3rd	1
7	AC03 5043	Front Spring Plate - 3rd	1
8	AC03 0091	3rd Mirror	1
9	A096 1986	Sensor Bracket	1
10	AW02 0067	Photointerrupter -EESX4019 - P15	1
11	AA06 0515	Tension Spring - 23.4mm	1
12	AX05 0064	Stepping Motor - DC 7W	1
13	AC03 0092	4th Mirror	1
14	AC03 0093	5th Mirror	1
15	AC03 5045	Front Spring Plate - 4th	1
16	AC03 5046	Rear Spring Plate - 4th	1
17	AC03 5048	Rear Spring Plate - 5th	1
18	AC03 5047	Front Spring Plate - 5th	1
19	A096 1961	Slider Bracket - 3rd Scanner	1
20	5209 1694	Guide Roller - 1st Scanner	1
21	A096 1963	Slider Shaft	1
22	5205 1694	Adjusting Cam - Start Lever	1
23	A096 1956	3rd Scanner Bracket	1
24	A096 1981	3rd Scanner Holder	1
25	AC05 1015	Guide Rod - 3rd Scanner	1
26	A096 1983	Right Holder - Guide Rod	1
27	A096 1984	Left Holder -. Guide Rod	1
28	A096 1982	Holder Fixing Plate	1
29	A096 1971	Drive Bracket - 3rd Scanner	1
30	AB01 7301	Pulley - 25Z	1
31	AB01 7039	Gear - 24/48T	1
32	AA04 3221	Timing Belt - B40S2M280	1
33	AB03 0412	Pulley - 25Z	1
34	A096 1976	Pulley Bracket	1

Index No.	Part No.	Description	Q'ty Per Assembly
35	A096 5470	Right Optics Harness	1
36	AA14 3062	Shoulder Screw - M4	1
37	A096 1873	Scanner Shoe Pin	4
101	0313 0060W	Philips Pan Head Screw - M3x6	
102	0951 4006W	Philips Screw With Flat Washer-M4x6	
103	0414 0082W	Tapping Screw With Flat Washer-M4x8	
104	0434 0060W	Tapping Screw - M4x6	
105	1105 0087	Clamp	
106	0314 0120W	Philips Pan Head Screw - M4x12	
107	0314 0060W	Philips Pan Head Screw - M4x6	
108	0314 0080W	Philips Pan Head Screw - M4x8	
109	0952 4008W	Philips Screw - M4x8	
110	0720 0040E	Retaining Ring - M4	
111	0574 0060E	Hexagon Headless Set Screw - M4x6	
112	0951 4008W	Philips Screw With Flat Washer-M4x8	
113	0313 0050W	Philips Pan Head Screw - M3x5	
114	0720 0070E	Retaining Ring - M7	

10. OPTICS SECTION 7 (A095/A096/A097)





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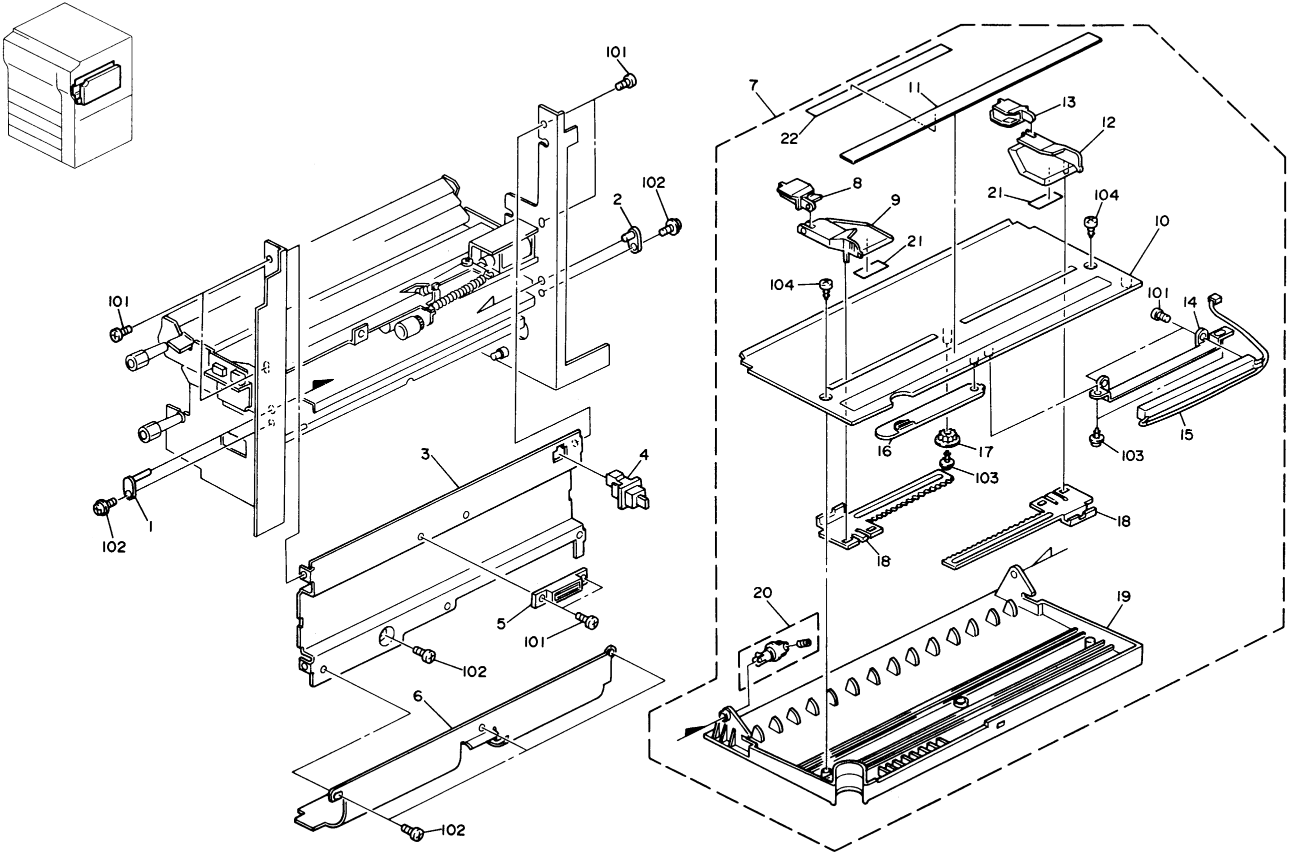
10. OPTICS SECTION 7 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1773	Lens Cover	1
2	A096 1835	Optics Shielding Belt	1
3	AA06 0516	Tension Spring - 42mm	2
4	A096 1760	Lens Ass'y	1
5	A096 1792	Rear Shielding Bracket	1
6	AA15 0337	Rear Shielding Mylar	1
7	AA15 0336	Front Shielding Mylar	1
8	A096 1767	Lens Position Bracket - Y	1
9	A053 1725	Lens Bracket Cam	1
10	AA13 2161	Lens Roller	1
11	A096 1766	Lens Slider	1
12	AA15 2228	Brush Seal - 4x5x120	1
13	A096 1787	Lens Position Bracket - X	1
14	5209 1694	Guide Roller - 1st Scanner	1
15	AC05 1014	Lens Guide Rod - Y	1
16	A096 1778	Rear Belt Holder	1
17	AA04 3220	Timing Belt - B40S2M560	1
18	A096 1775	Lens Driven Pulley - Y	1
19	AA06 3253	Tension Spring - 20mm	1
20	AB01 7300	Lens Drive Pulley	1
21	A096 1777	Front Belt Holder	1
22	A096 1781	Lens Bracket	1
23	AB01 7039	Gear - 24/48T	1
24	AA15 2225	Brush Seal - 6x10 - 288	1
25	A096 1782	Harness Cover	1
26	A096 1796	Harness Bracket A	1
27	A096 1797	Harness Bracket B	1
28	A096 5482	Lens Drive Harness	1
29	AX04 0065	Stepped Motor - DC 13W	1
30	A096 1791	Lens Sensor Bracket - Y	1
31	A096 1876	Harness Clamp	1
32	AW02 0061	Photointerrupter - EE - SX4019-P1	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0313 0050W	Philips Pan Head Screw - M3x5	
102	0314 0060W	Philips Pan Head Screw - M4x6	
103	1105 0278	Harness Clamp	
104	0951 4010W	Philips Screw With Flatwasher-M4x10	
105	0720 0040E	Retaining Ring - M4	
106	0314 0120W	Philips Pan Head Screw - M4x12	
107	0951 4012W	Philips Screw With Washer - M4x12	
108	0951 4006W	Philips Screw With Flat Washer-M4x6	

11. BY-PASS FEED TABLE (A095/A096/A097)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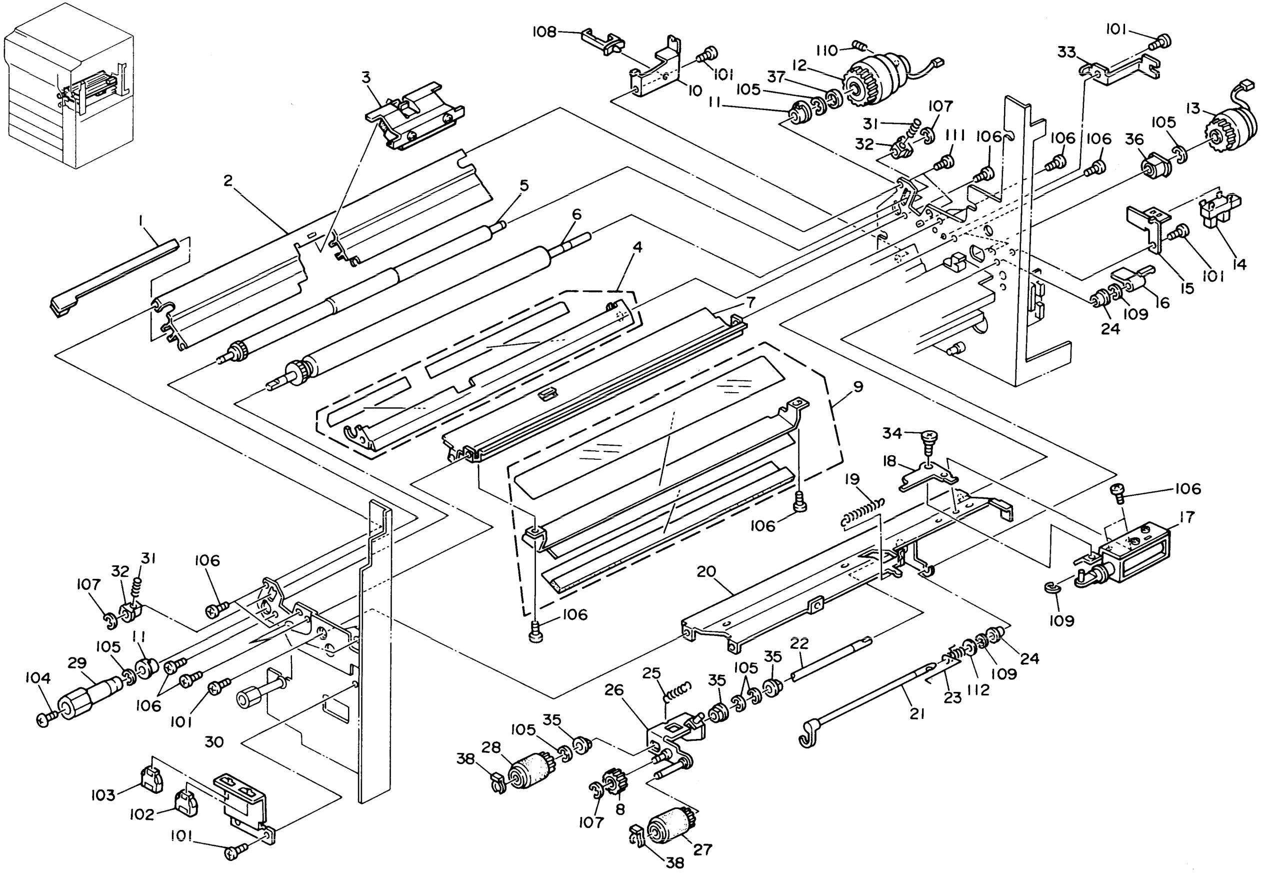
11. BY-PASS FEED TABLE (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A053 2770	Holder - Manual Feed Table	1
2	A007 2803	Manual Feed Table Holder	1
3	A096 2706	By-pass Feed Cover	1
4	AW50 0012	Push Switch	1
5	AA02 1025	Magnet Catch	1
6	A096 2707	Upper Guide - By-pass	1
7	A096 2708	By-pass Feed Table - A4	1
	A096 2811	x/o MB13	
7	A096 2810	By-pass Feed Table - LT	1
8	A096 2761	Front Support Guide	1
9	A096 2741	Front Feed Guide	1
10	A096 2711	Feed Table	1
11	AA00 2175	Decal - Paper Size - A4	1
11	AA00 2192	Decal - Paper Size - LT	1
12	A096 2751	Rear Feed Guide	1
13	A096 2771	Rear Support Guide	1
14	A096 2782	Size Switch Bracket	1
15	A096 5335	Paper Size Switch	1
16	A053 2837	Paper Guide - Manual Feed	1
17	AB01 3492	Gear - 16Z	1
18	A096 2780	Feed Guide Gear	2
19	A096 2721	By-pass Feed Cover	1
20	A053 2773	Holder - Manual Feed Table	1
21	A069 2645	Seal - 0.2x16x47	2
22	A096 2781	By-pass Table Bracket	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0434 0060B	Philips Tapping Screw - M4x6	
103	0965 3008B	Tapping Screw With Washer - M3x8	
104	0965 3008F	Tapping Screw With Washer - M3x8	

12. PAPER REGISTRATION 1 (A095/A096/A097)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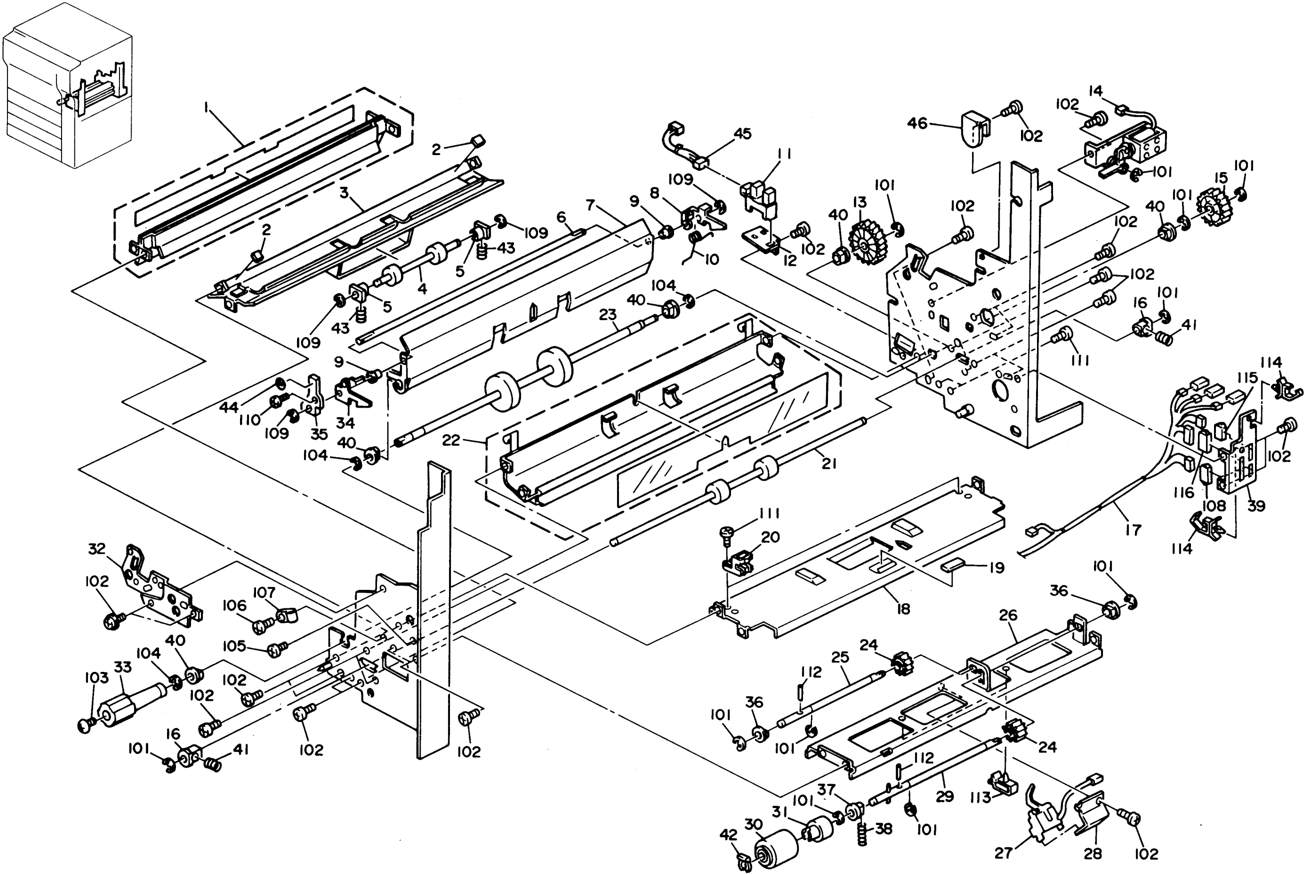
12. PAPER REGISTRATION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 5200	Registration Sensor Board	1
2	A096 2606	Resist Sensor Guide	1
3	A096 2607	Paper Dust Cleaner	1
4	A096 2612	Lower Registration Guide	1
5	AF02 0255	Upper Registration Roller	1
6	AF02 0242	Lower Registration Roller	1
7	A096 2626	Front Upper Registration Guide	1
8	5447 2706	Gear-15T	1
9	A096 2622	Front Lower Registration Guide	1
10	A096 2604	Magnetic Clutch Stopper	1
11	5215 2672	Bushing	2
12	AX21 0036	Magnetic Clutch - Registration	1
13	AX20 0090	Magnetic Clutch - By-pass	1
14	AW02 0056	Photointerrupter-EE-SX4235A-P1	1
15	A096 2699	Sensor Bracket-Paper End	1
16	A096 2700	Paper End Shutter	1
17	A096 2692	Pick-up Solenoid - By-pass	1
18	A096 2695	Pick-up Roller Link	1
19	AA06 0517	Pick-up Release Spring	1
20	A096 2687	Upper Feed Stay	1
21	A096 2697	Paper End Feeler	1
22	AA14 0489	Shaft-Feed	1
23	AA06 6213	Feeler Spring	1
24	5443 2668	Bushing - 4x6x7mm	2
25	AA06 0518	Pick-up Pressure Spring	1
26	A096 2690	Pick-up Roller Arm	1
27	AF03 0021	Pick-up Roller	1
28	AF03 1021	Paper Feed Roller	1
29	A060 2512	Registration Roller Knob	1
30	A096 2598	Front Connector Bracket	1
31	5442 2754	Spring - Registration Roller	2
32	5205 2697	Bushing - Upper Registration Roller	2
33	A096 2701	Clutch Stopper - By-pass	1
34	5442 1659	Stepped Screw - M4	2
35	5053 0223	Bushing - 8mm	3

Index No.	Part No.	Description	Q'ty Per Assembly
36	5205 2865	Bushing - Paper Feed Roller	1
37	AA13 2129	Spacer - 8x12x4.5	1
38	5447 2681	Snap Ring	2
101	0434 0060B	Philips Tapping Screw - M4x6	
102	1102 6247	Connector - 4P	
103	1102 6246	Connector - 3P	
104	0951 4008B	Philips Screw With Washer - M4x8	
105	0720 0060B	Retaining Ring - M6	
106	0314 0060B	Philips Pan Head Screw - M4x6	
107	0720 0050B	Retaining Ring - M5	
108	1105 0278	Harness Clamp	
109	0720 0030E	Retaining Ring - M3	
110	0574 0060E	Hexagon Headless Set Screw - M4x6	
111	0314 0080B	Philips Pan Head Screw - M4x8	
112	0701 0040B	Flat Washer - M4	
		MB22 (ADDED)	

13. PAPER REGISTRATION 2 (A095/A096/A097)



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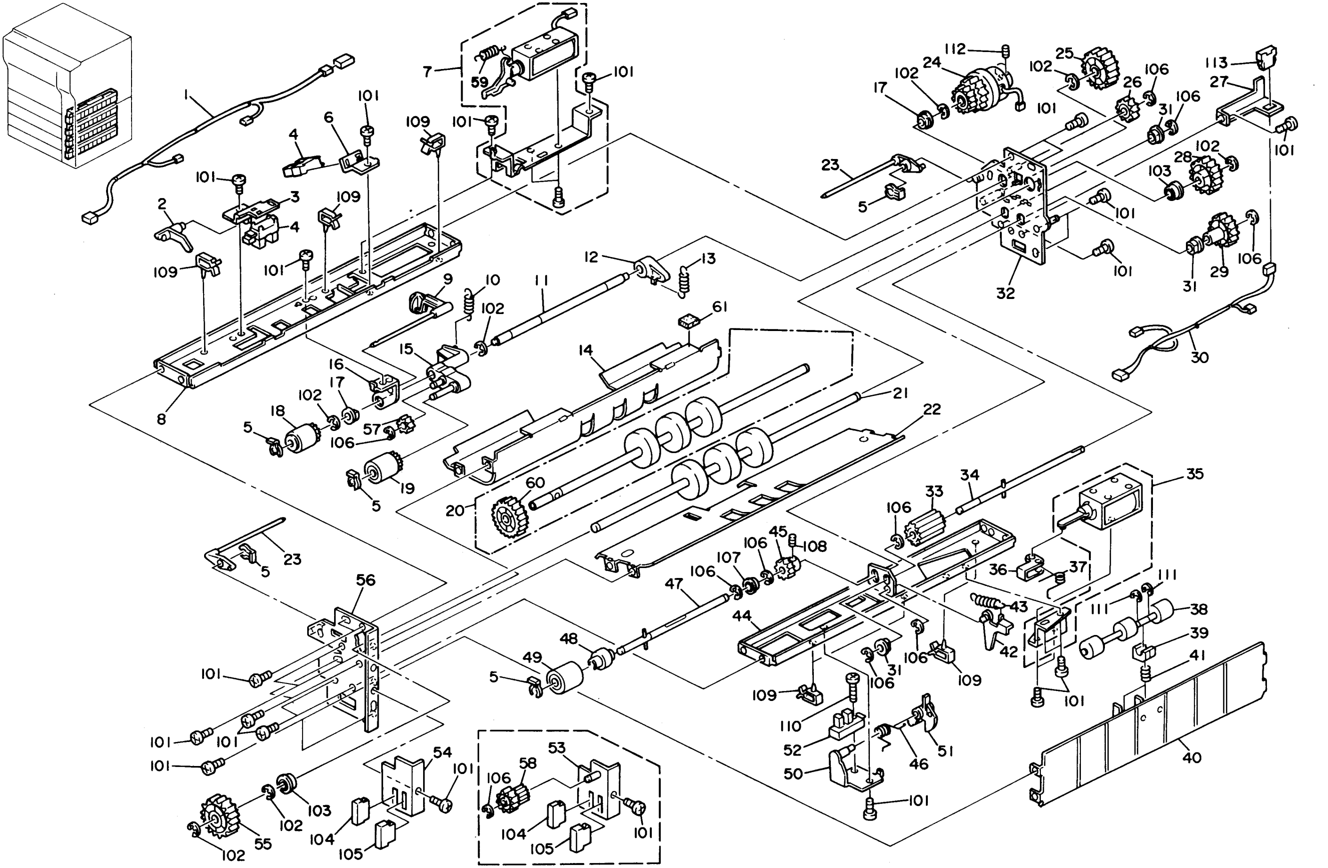
13. PAPER REGISTRATION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 2661	Paper Bank Relay Guide	1
2	A469 2123	Rubber Cushion -1 x10x10mm	2
3	**A096 2672**	Duplex Exit Guide	1
4	AF02 0288	Duplex Exit Roller	1
5	AA08 0034	Bushing - 4x5x7	2
6	AA14 0486	Lock Shaft	1
7	A096 2632	Middle Shutter Guide	1
8	A096 2634	Rear Lock	1
9	5443 2668	Bushing - 4x6x7mm	2
10	AA06 6211	Rear Lock Spring	1
11	AW02 0056	Photointerrupter - EE-SX4235A-P1	1
12	A096 2636	Sensor Bracket	1
13	AB01 1127	Gear - 52Z	1
14	A096 2642	Guide Shutter Solenoid	1
15	AB01 1128	Gear - 40Z	1
16	5205 2697	Bushing - Upper Registration Roller	2
17	A096 5405	By-pass Feed Harness	1
18	A096 2703	Lower Guide - By-pass	1
19	A053 2916	Friction Pad - B	1
20	A096 2704	Guide Holder	2
21	AF02 0287	Transport Driven Roller	1
22	A096 2651	LCT Exit Guide ,	1
23	AF02 0286	Transport Drive Roller	1
24	AB01 3420	Gear - 18Z	2
25	AA14 0488	Separation Drive Shaft	1
26	A096 2682	Separation Roller Bracket	1
27	AW02 0058	Photointerrupter	1
28	A096 2683	Sensor Bracket	1
29	A096 2684	Separation Roller Shaft	1
30	AF03 2021	Separation Roller	1
31	A060 2617	Separation Torque Limiter	1
32	A096 2593	Front Support Plate	1
33	A060 2512	Registration Roller Knob	1
34	A096 2633	Front Lock	1
35	A096 2635	Lock Release Lever	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	5053 0447	Bushing - 6mm	2
37	AA08 0037	Bushing -6 mm	1
38	AA06 3164	Pressure Spring	1
39	A096 2600	Rear Connector Bracket	1
40	5053 0223	Bushing - 8mm	5
41	AA06 3254	Driven Roller Spring	2
42	5447 2681	Snap Ring	1
43	AA06 3255	Exit Roller Spring	2
44	AA00 1213	Decal - B2	1
45	A096 5432	Duplex Relay Harness	2
46	A096 3408	Grounding Plate	1
101	0720 0040B	Retaining Ring - M4	
102	0434 0060B	Philips Tapping Screw - M4x6	
103	0951 4008B	Philips Screw With Washer- M4x8	
104	0720 0060B	Retaining Ring - M6	
105	0314 0080B	Philips Pan Head Screw - M4x8	
106	0964 4008B	Tapping Screw With Flat Washer-M4x8	
107	1105 0005	Nylon Clip - 3N	
108	1102 6248	Connector - 5P	
109	0720 0030B	Retaining Ring - M3	
110	0313 0080B	Philips Pan Head Screw - M3x8	
111	0314 0060B	Philips Pan Head Screw - M4x6	
112	0632 0100G	Pin - 2x10mm	
113	1105 0087	Clamp	
114	1105 0291	Wire Saddle	
115	1102 6250	Connector - 7P	
116	1102 6256	Connector - 13P	

14. PAPER FEED SECTION (A095/A096/A097)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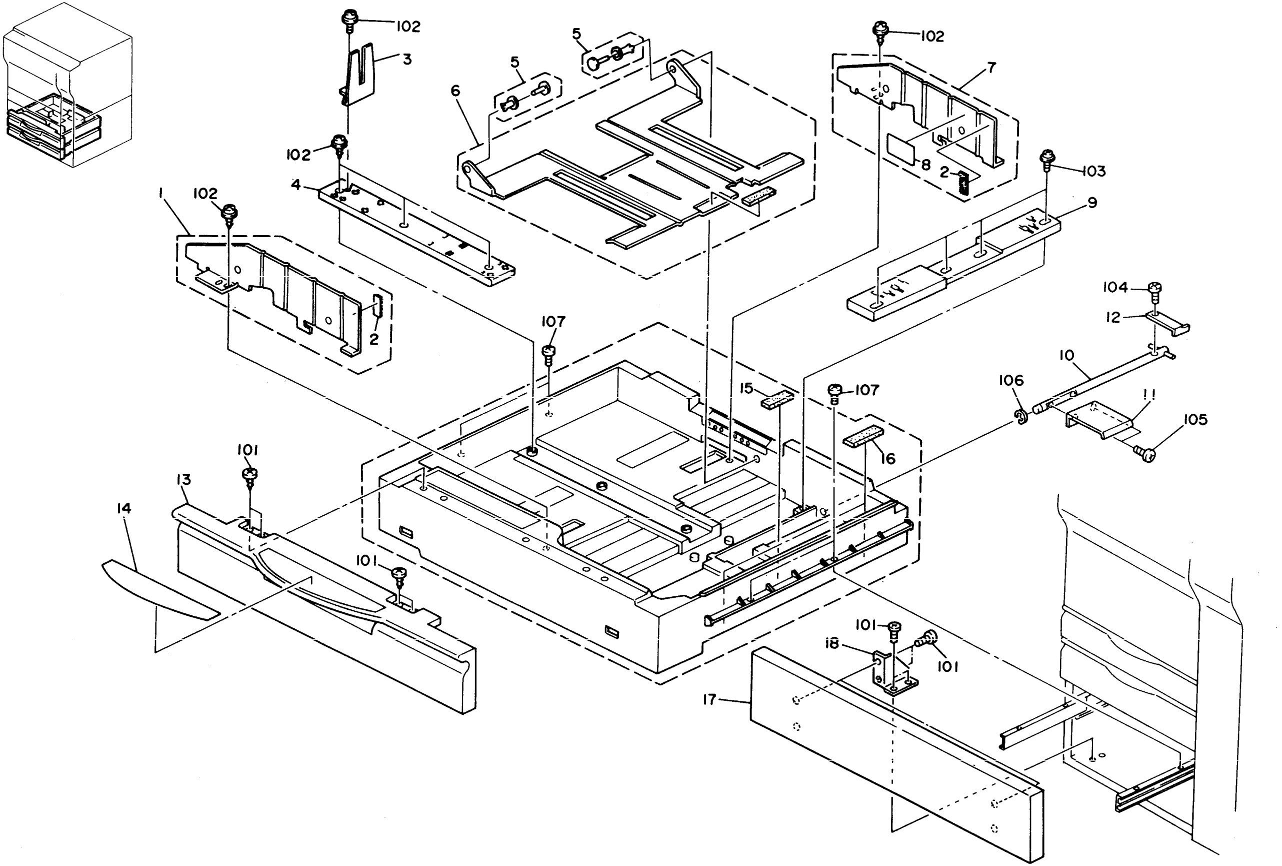
14. PAPER FEED SECTION (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 5411	Upper Feed Unit Harness	3
2	A096 6344	Paper End Actuater	3
3	A096 6345	End Sensor Bracket	3
4	AW02 0056	Photointerrupter - EE-SX4235A-P1	6
5	54472681	Snap Ring	15
6	A096 6358	Photointerrupter Bracket	3
7	A096 6355	Pick-up Solenoid	3
8	A096 6346	Paper Feed Stay	3
9	A096 6342	Paper End Feeler	3
10	AA06 0523	Pick-up Pressure Spring	3
11	AA14 0498	Feed Roller Shaft	3
12	A096 6353	Feed Roller Lever	3
13	AA06 0522	Stopper Spring	3
14	A096 6337	Paper Feed Guide	3
15	A096 6351	Pick-up Arm	3
16	A096 6352	Feed Roller Bracket	3
17	AA08 2047	Bushing - 8x16x7	6
18	AF03 1022	Paper Feed Roller	3
19	AF03 0020	Pick-up Roller	3
20	AF02 0290	3rd Grip Roller	1
21	AF02 0289	Grip Drive Roller	2
22	A096 6338	Separation Guide	3
23	A096 6360	Paper Flatenner	6
24	AX21 0037	Magnetic Clutch	3
25	AB01 3775	Gear - 33Z	3
26	AB01 3774	Gear - 18Z	3
27	A096 6366	Clutch Stopper Arm	3
28	AB01 3777	Gear - 32Z	2
29	AB01 3776	Gear - 30Z	3
30	A096 5412	Lower Feed Unit Harness	3
31	AA08 2046	Bushing - 6x12x6	9
32	A096 6330	Rear Side Plate	3
33	AB01 3773	Gear - 18Z	3
34	A096 6306	Separation Drive Shaft	3
35	A096 6315	Release Solenoid	3
36	A096 6311	Release Lever	3
37	AA06 6216	Release Spring	3
38	AF02 0280	Driven Roller	3
39	AA08 0156	Bushing - M4	6
40	A096 6369	Vertical Transport Guide	3
41	AA06 3487	Spring -10mm	6
42	A096 6308	Separation Pressure Lever	3
43	AA06 0520	Lever Spring - 24.4mm	3
44	A096 6303	Separation Roller Stay	3
45	AB01 3729	Gear - 18Z	3
46	AA06 6189	Feed Sensor Spring	3
47	A096 6307	Separation Driver Shaft	3
48	A060 2617	Separation Torque Limiter (A095/A096)	3
48	A097 6000	Separation Torque Limiter (A097)	3
49	AF03 2023	Separation Roller	3
50	A096 6321	Position Sensor Bracket	3
51	A096 6322	Position Sensor Feeler	3
52	AW02 0061	Photointerrupter - EE - SX4019-P1	3
53	A096 6381	Unit Fixing Plate - 3rd	1
54	A096 6375	Unit Fixing Plate	2
55	AB01 3779	Gear - 32Z	1
56	A096 6335	Front Side Plate	3
57	5447 2706	Gear - 15T	3
58	AB01 3780	Gear - 28/16Z	1
59	AA06 0521	Lower Release Spring	1
60	AB01 3778	Gear - 32Z	1
61	AA16 1095	Pad - 2x8x8x	1

Index No.	Part No.	Description	Q'ty Per Assembly
01	0434 0060B	Philips Tapping Screw - M4x6	
02	0720 0060B	Retaining Ring - M6	
03	0742 3808	Ball Bearing - 8x16x5	
04	1102 6265	Connector - Red 8P	
05	1102 6250	Connector - 7P	
06	0720 0040B	Retaining Ring - M4	
07	0805 3145	Ball Bearing - 6x12x4mm	
08	0574 0050E	Hexagon Headless Set Screw - M4x5	
09	1105 0087	Clamp	
10	0314 0120B	Philips Pan Head Screw - M4x12	
11	0720 0030B	Retaining Ring - M3	
12	0573 0040B	Hexaqon Headless Set Screw - M3x4	
13	1102 6245	Connector -2P	

Index No.	Part No.	Description	Q'ty Per Assembly

15. PAPER TRAY SECTION 1 (A095/A096/A097)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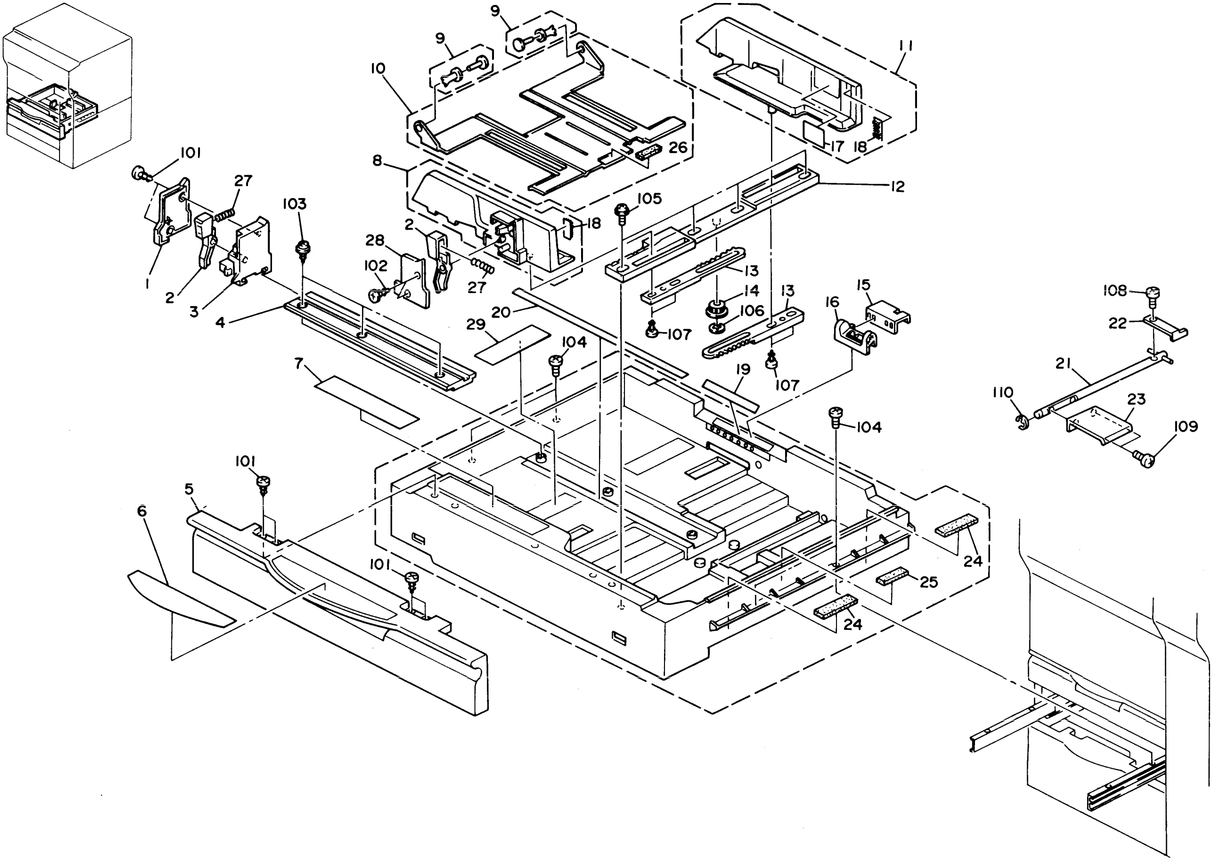
15. PAPER TRAY SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 6549	Front Side Fence	2
2	A029 7904	Pad - CFF	4
3	AF01 7010	End Fence	2
4	A096 6568	Positioning Plate - End Fence	2
5	A048 2838	Nylon Rivet	4
6	A096 6556	Tray Bottom Plate	2
7	A096 6550	Rear Side Fence	2
8	AA00 2010	Decal - Paper Level	2
9	A096 6551	Positioning Plate - Side Fence	2
10	A096 6524	Lift Shaft	2
11	A096 6526	Lift Lever	2
12	A096 6527	Paper Guide Feeler	2
13	A096 6589	Paper Tray Cover - Short	1
13	A096 6620	Paper Tray Cover - Long	1
14	AA00 0139	Decal - No.3	1
14	AA00 0143	Decal - No.1	1
15	AA15 1804	Lever Cushion	2
16	AA15 1805	Bottom Plate Cushion	2
17	A095 1383	Lower Front Cover	1
18	A095 1384	Bracket - Lower Front Cover	2
101	0414 0082F	Philips Truss Head Screw - M4x8	
102	0965 4008B	Tapping Screw - M4x8	
103	0952 4008W	Philips Screw - M4x8	
104	0313 0060B	Philips Pan Head Screw - M3x6	
105	0314 0080B	Philips Pan Head Screw - M4x8	
106	0720 0060B	Retaining Ring - M6	
107	0354 0050F	Philips Pan Head Bind Screw-M4x5	

16. PAPER TRAY SECTION 2 (A095/A096/A097)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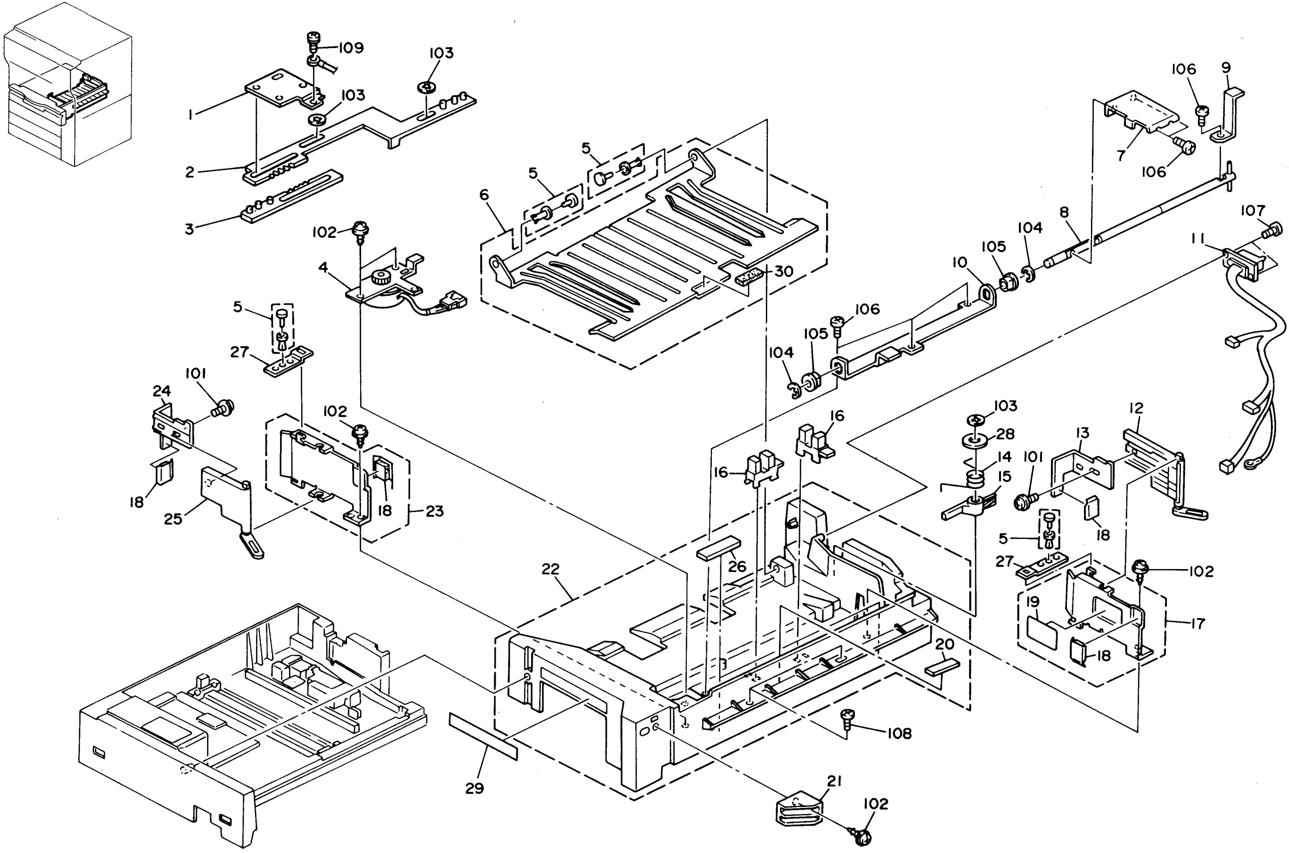
16. PAPER TRAY SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 6512	Universal Tray - A4	1
*	A096 6511	Universal Tray - LT	1
1	A096 6563	End Fence Cover	1
2	A096 6537	Stopper Lever	2
3	A096 6562	End Fence	1
4	A096 6564	End Fence Plate	1
5	A096 6589	Paper Tray Cover - Short	1
6	AA00 0138	Decal - No.2	1
7	AA00 0134	Decal - Tray Universal	1
8	A096 6534	Front Side Fence	1
9	A048 2838	Nylon Rivet	2
10	A096 6556	Tray Bottom Plate	1
11	A096 6541	Rear Side Fence	1
12	A096 6544	Side Fence Plate - A4	1
12	A096 6545	Side Fence Plate - LT	1
13	A096 6539	Side Fence Gear	2
14	AB01 3492	Gear - 16Z	1
15	A096 6578	Size Sensor Plate	1
16	A096 6577	Size Sensor Slider	1
17	AA00 2010	Decal - Paper Level	1
18	A096 6553	Side Fence Pad	2
19	AA00 2184	Decal - A4	1
19	AA00 2181	Decal - LT	1
20	AA00 2178	Decal - End Fence - A4	1
20	AA00 2179	Decal - End Fence - LT	1
21	A096 6524	Lift Shaft	1
22	A096 6527	Paper Guide Feeler	1
23	A096 6526	Lift Lever	1
24	AA15 1805	Bottom Plate Cushion	2
25	AA15 1804	Lever Cushion	1
26	AF01 3002	Bottom Plate Pad	1
27	AA06 3379	Stopper Spring - 22mm	2
28	A096 6536	Side Fence Cover	1
29	AA00 2176	Decal - Side Fence - A4	1
29	AA00 2177	Decal - Side Fence - LT	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0414 0082F	Philips Truss Head Screw - M4x8	
102	0413 0082B	Tapping Screw - M3x8	
103	0965 4008B	Tapping Screw - M4x8	
104	0354 0050F	Philips Pan Head Bind Screw-M4x5	
105	0952 4008W	Philips Screw - M4x8	
106	0805 0073	Retaining Ring - M5	
107	0433 0082B	Tapping Screw - M3x8	
108	0313 0060B	Philips Pan Head Screw - M3x6	
109	0314 0080B	Philips Pan Head Screw - M4x8	
110	0720 0060B	Retaining Ring - M6	

17. TANDEM TRAY 1 (A095/A096/A097)



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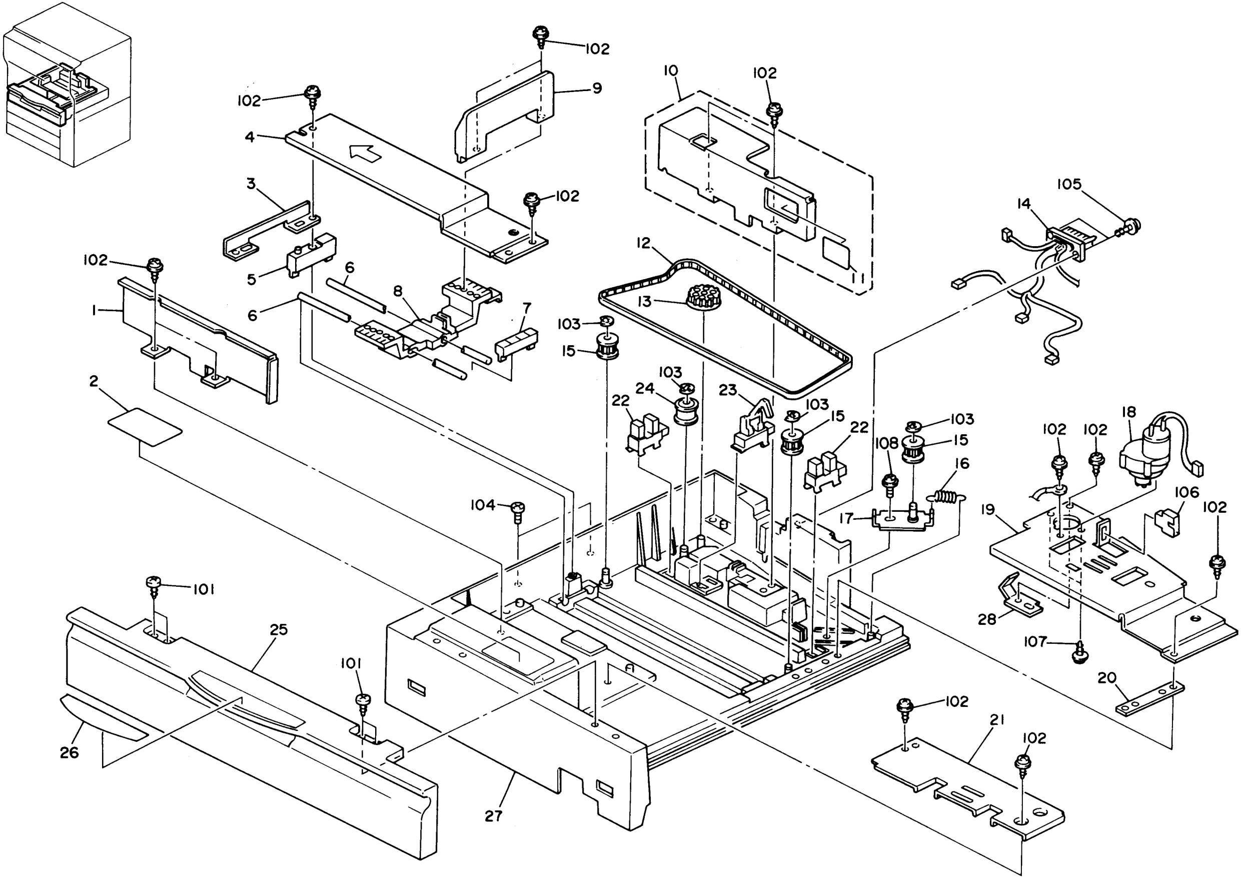
17. TANDEM TRAY (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 6600	Tandem Tray	1
1	A096 6672	Motor Cover	1
2	A096 6658	Rear End Fence Gear	1
3	A096 6659	Front End Fence Gear	1
4	A096 5301	Tandem Tray Motor - DC 17W	1
5	A048 2838	Nylon Rivet	4
6	A096 6673	Bottom Plate	1
7	A096 6654	Lift Lever	1
8	A096 6652	Lift Shaft	1
9	A096 6656	Paper Volume Feeler	1
	A096 6655	x/o MB1	
10	A096 6653	Lift Shaft Bracket	1
11	A096 5419	Right Tandem Tray Harness	1
12	A096 6647	Rear End Fence Guide	1
13	A096 6666	Right Rear End Fence	1
14	AA06 6219	Tray Lock Spring	1
15	A096 6668	Release Pawl	1
16	AW02 0056	Photointerrupter - EE-SX4235A-P1	2
17	A096 6648	Right Rear Side Fence	1
18	A096 6671	Paper Guide Plate	4
19	AA00 2010	Decal - Paper Level	1
20	5205 2777	Cushion - Lower Pick up Guide	1
21	A096 6669	LCT Stopper	1
22	A096 6674	Right Tandem Tray	1
23	A096 6645	Right Front Side Fence	1
24	A096 6662	Right Front End Fence	1
25	A096 6646	Front End Fence Guide	1
26	AA16 2062	Bottom Plate Cushion	2
27	A096 6676	Side Fence Support Plate	2
28	AA13 2169	Spacer - 5.7x16x1.5	1
29	AA00 0144	Decal - Right Tandem Tray	1
30	AF01 3002	Bottom Plate Pad	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0960 3006B	Philips Flange Screw - M3x6	
102	0965 4008B	Tapping Screw - M4x8	
103	0805 0083	Retaining Ring - M4	
104	0720 0060B	Retaining Ring - M6	
105	0805 3389	Bushing - 8x10x6mm	
106	0314 0080B	Philips Pan Head Screw - M4x8	
107	0965 3012W	Tapping Screw With Flat Washer - M3	
108	0354 0050F	Philips Pan Head Bind Screw-M4x5	
109	0314 0080W	Philips Pan Head Screw - M4x8	

18. TANDEM TRAY 2 (A095/A096/A097)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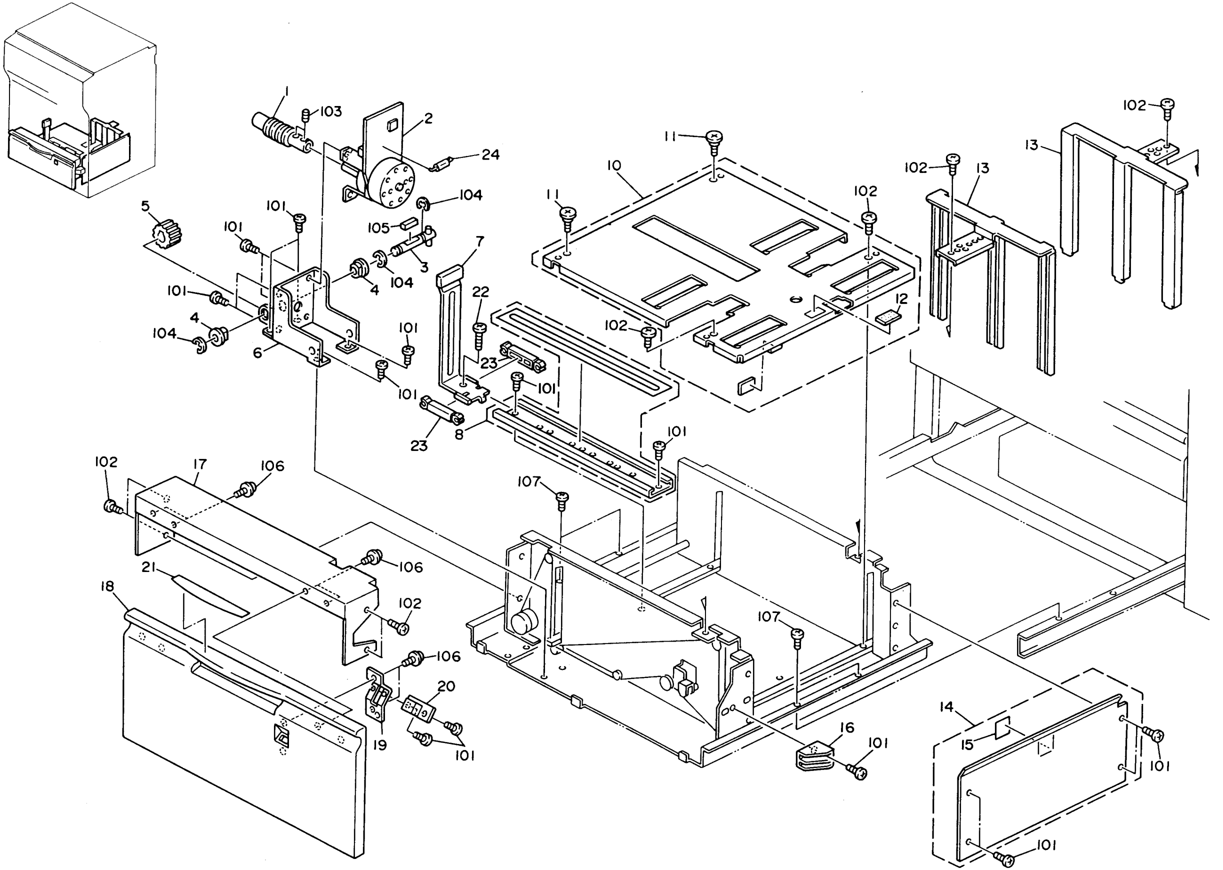
18. TANDEM TRAY 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AF01 6062	Left Front Side Fence	1
2	AA00 0136	Decal - Left Tandem Tray	1
3	A096 6641	Grounding Plate 1	1
4	A096 6629	Middle Bottom Plate	1
5	A096 6634	Left Rod Holder	1
6	AA14 0499	Guide Rod	2
7	A096 6633	Right Rod Holder	1
8	A096 6632	Tandem Tray Slider	1
9	AF01 7011	Left End Fence	1
10	A096 6644	Left Rear Side Fence	1
11	AA00 2010	Decal - Paper Level	1
12	AA04 3345	Timing Belt - B30S3M888	1
13	AB03 0417	Timing Pulley - 32Z	1
14	A096 5418	Left Tandem Tray Harness	1
15	AB03 0418	Timing Pulley - 12Z	3
16	AA06 0542	Tension Spring	1
17	A096 6636	Tightener Bracket	1
18	A096 5300	Tandem Tray Motor -DC 11W	1
19	A096 6607	Rear Bottom Plate	1
20	A096 6642	Grounding Plate 2	1
21	A096 6640	Front Bottom Plate	1
22	AW02 0056	Photointerrupter - EE-SX4235A-P1	2
23	AW02 0008	Photointerrupter	1
24	A096 6670	Timing Belt Roller	1
25	A096 6620	Paper Tray Cover - Long	1
26	AA00 0137	Decal - Tandem Tray 1	1
27	AF01 0063	Left Tandem Tray	1
28	A096 6649	Grounding Spring Plate	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0414 0082F	Philips Truss Head Screw - M4x8	
102	0965 4008B	Tapping Screw - M4x8	
103	0720 0040B	Retaining Ring - M4	
104	0354 0050F	Philips Pan Head Bind Screw-M4x5	
105	0965 3012W	Tapping Screw With Flat Washer - M3	
106	1102 6245	Connector - 2P	
107	0965 3010W	Tapping Screw With Flat Washer-M3x1	
108	0965 4010B	Tapping Screw - M4x10	

19. LCT TRAY 1 (A095/A096/A097)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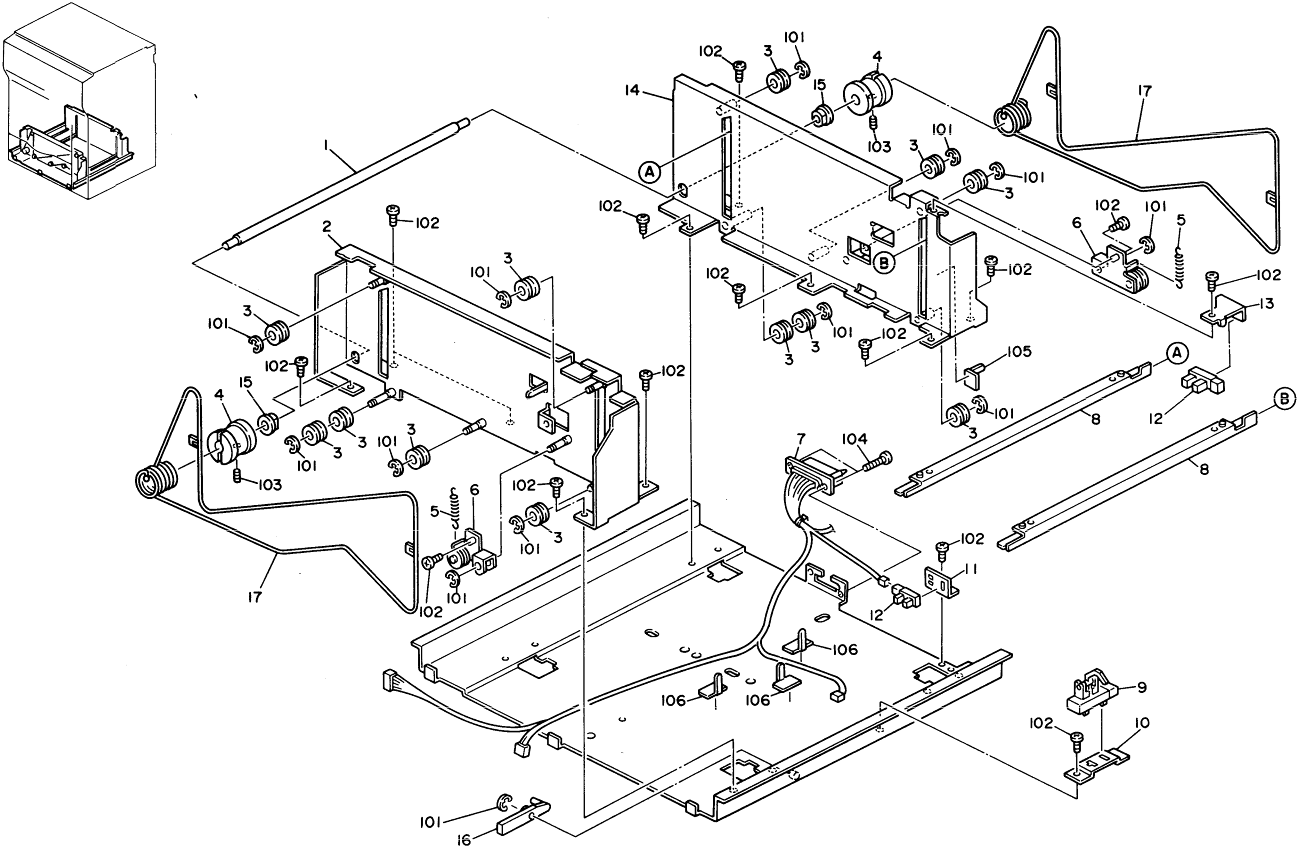
19. LCT TRAY 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	5446 2698	Worm Gear	1
2	AX06 0051	DC Motor-24V11.2W	1
3	A096 6784	LCT Drive Shaft	1
4	5053 0223	Bushing - 8mm	2
5	5446 2702	Gear-22T	1
6	A096 6782	Motor Bracket	1
7	A096 6760	End Fence	1
8	A096 6752	End Fence Rail	1
9	A096 6753	Rail Shaft	1
10	A096 6765	Tray Bottom Plate	1
11	5442 2117	Shoulder Screw - Hinge	2
12	5201 2858	Friction Pad	1
13	AF01 6057	Side Fence	2
14	A096 6745	Right Side Plate	1
15	5446 2638	Decal -Paper Lower Limit	1
16	A096 6669	LCT Stopper	1
17	A096 6808	LCT Inner Cover	1
18	A096 6806	LCT Front Cover	1
19	A096 6811	Push Switch Bracket	1
20	A079 5794	Push Switch -Paper Tray	1
21	AA00 0139	Decal - No.3	1
22	5408 2035	Stepped Screw - M4	1
23	A096 6758	End Fence Slider	1
24	A096 9533	Fuse - 125V/4A MB10 (ADDED)	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0060B	Philips Tapping Screw - M4x6	
102	0414 0080B	Tapping Screw - M4x8	
103	0574 0050E	Hexagon Headless Set Screw - M4x5	
104	0720 0060E	Retaining Ring - M6	
105	0930 0400G	Parallel Key - 4x4x10	
106	0965 4008B	Tapping Screw - M4x8	
107	0801 0146	Bind Screw - M4x4	

20. LCT TRAY 2 (A095/A096/A097)



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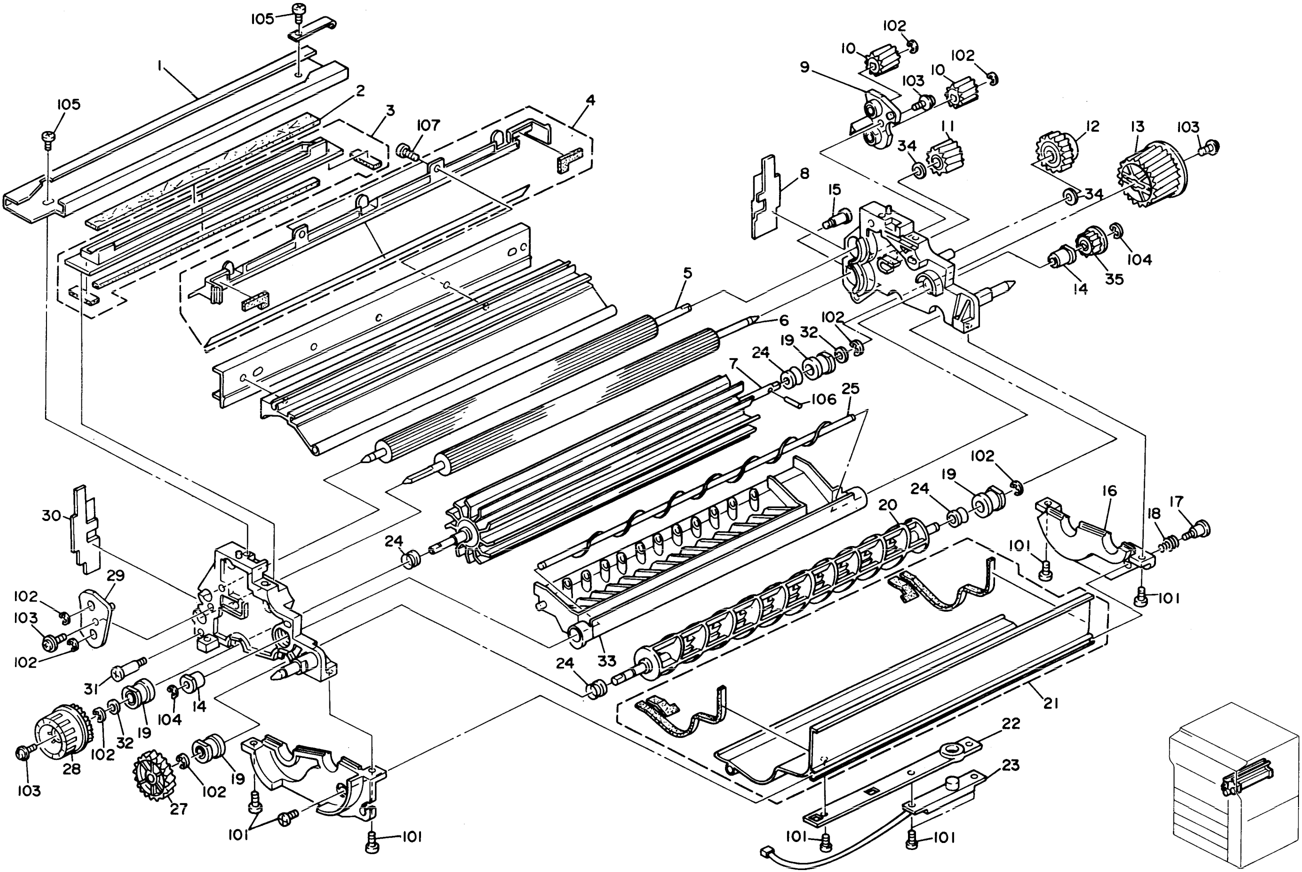
20. LCT TRAY 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AA14 0529	Drive Wire Shaft	1
2	A096 6736	Front Side Plate	1
3	AB03 2058	Wire Pulley - M10	12
4	5446 2671	Drive Pulley - Paper Tray	2
5	5403 1030	Tension Spring	2
6	A028 3356	Rear Wire Tightener	2
7	A096 7632	LCT Harness	1
8	A096 6770	Bottom Plate Stay	2
9	AW02 0008	Photointerrupter	1
10	A096 6799	Paper Sensor Bracket	1
11	A096 6789	Lower Sensor Bracket	1
12	AW02 0056	Photointerrupter - EE-SX4235A-P1	2
13	A096 6794	Upper Sensor Bracket	1
14	A096 6741	Rear Side Plate	1
15	5053 0419	Bushing - 10mm	2
16	5415 2642	Lock Arm	1
17	AA05 0083	LCT Drive Wire - 1785mm	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040B	Retaining Ring - M4	
102	0434 0060B	Philips Tapping Screw - M4x6	
103	0575 0050E	Hexagon Headless Set Screw - M5x5	
104	0313 0080B	Philips Pan Head Screw - M3x8	
105	1105 0278	Harness Clamp	
106	1105 0291	Wire Saddle	

21. DEVELOPMENT UNIT (A095/A096/A097)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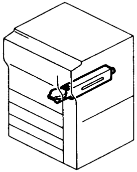
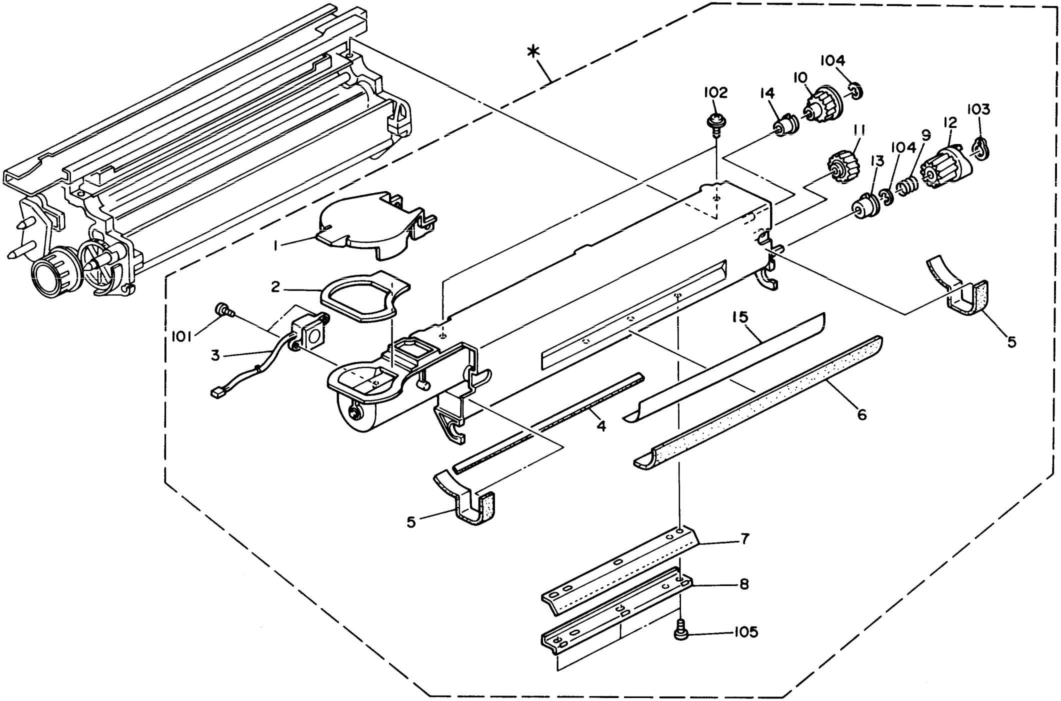
21. DEVELOPMENT UNIT (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A097 3050	Development Unit (A095/A096/A097)	1
	A096 3049	o/o MB20 (A095/A096)	
	A096 3050	o/o MB5 (A095/A096)	
1	A096 3104	Development Guide Rail	1
2	AA01 2060	Development Filter	1
3	A096 3141	Development Filter Case	1
4	A096 3100	Entrance Seal	1
5	AD03 1247	Upper Development Roller	1
6	AD03 1248	Lower Development Roller	1
7	AD03 8052	Paddle Roller	1
8	AA15 2227	Rear Drum Seal	1
9	A096 3126	Bearing Case	1
10	AB01 3791	Gear - 17Z	2
11	AB01 3786	Gear - 18Z	1
12	AB01 3788	Gear - 23Z	1
13	AB01 3783	Gear - 34Z	1
14	AA08 0152	Bushing - 4x12x13	2
15	AA14 3416	Stepped Screw - M4x3	1
16	A096 3057	Lower Rear Side Plate	1
17	AA14 3430	Shoulder Screw - M4x16	1
18	AA06 3272	Grounding Spring	1
	AA06 3263	o/o MB19	
19	AA08 0150	Bushing - 6x16x12.8	4
20	AD03 8053	Mixing Paddle Roller	1
21	A096 3052	Lower Development Casing	1
22	A096 3059	Toner Sensor Guide	1
23	AW23 0006	Toner Density Sensor	1
24	AA15 2142	Seal -11x7x3.8mm	4
25	AD03 7035	Mixing Auger	1
26	A096 3056	Lower Front Side Plate	1
27	AB01 3785	Gear - 43Z	1
28	A096 3069	Development Knob	1
29	A096 3125	Adjusting Plate	1
30	AA15 2226	Front Drum Seal	1
31	AA14 3426	Stopped Screw - M4x17	1

Index No.	Part No.	Description	Q'ty Per Assembly
32	AA13 2024	Spacer - M6	2
33	AD03 6047	Back Spill Plate (A095/A096/A097)	1
	A096 3086	o/o MB20 (A095/A096)	
34	AA13 2025	Spacer - 1x8x12	2
35	AB01 3790	Gear - 25Z	1
101	0314 0080B	Philips Pan Head Screw - M4x8	
102	0720 0040B	Retaining Ring - M4	
103	0951 3006B	Philips Screw With Flat Washer-M3x6	
104	0720 0030B	Retaining Ring - M3	
105	0314 0060B	Philips Pan Head Screw - M4x6	
106	0622 5160E	Spring Pin - 2.5x16	
107	0951 4008B	Philips Screw With Washer - M4x8	

22. TONER HOPPER SECTION (A095/A096/A097)

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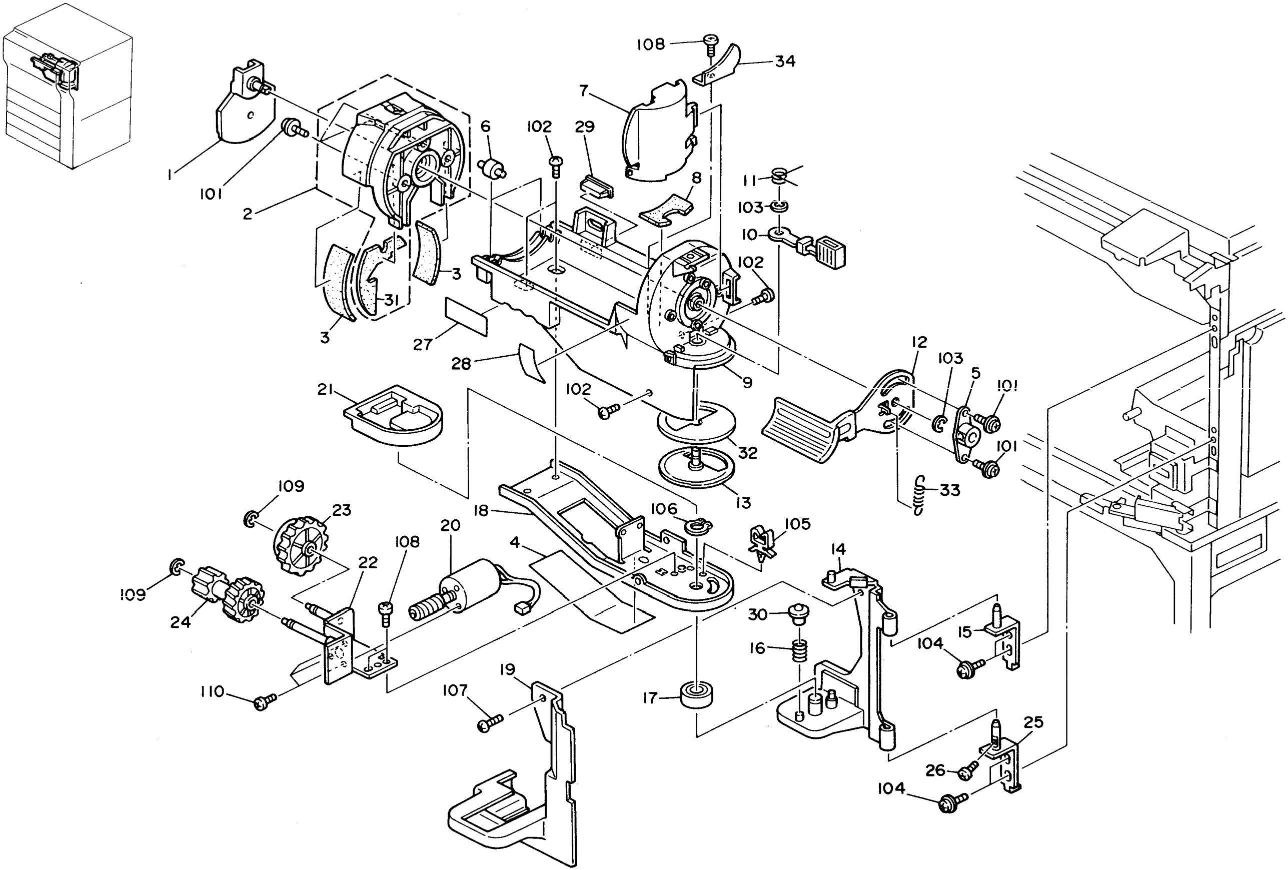
22. TONER HOPPER SECTION (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 3150	Toner Supply Unit	1
1	A096 3183	Hopper Shutter	1
2	AA15 1791	Hopper Entrance Seal	1
3	AW31 0003	Toner End Sensor	1
4	AA15 1794	Seal - 3x5x322	1
5	AA15 1792	Seal - 3x15x85	2
6	AA15 1793	seal - 3X35X211	1
7	A096 3181	Slitter	1
8	A096 3182	Plate Nut	1
9	AA06 0291	Spring	1
10	AB01 3749	Gear - 15Z	1
11	AB01 3747	Gear -162	1
12	AB01 3748	Joint Gear -152	1
13	A096 3175	Bushing - 8x14x8	1
14	A096 3176	Bushing - 6x12x8.5	1
15	AA15 0361	Slitter Cover Seal	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0413 0082W	Tapping Screw - M3x8	
102	0951 4006B	Philips Screw With Washer- M4x6	
103	0727 0080	C-ring - M8	
104	0720 0040B	Retaining Ring - M4	
105	0314 0050B	Philips Pan Head Screw - M4x5	

23. TONER BOTTLE HOLDER SECTION (A095/A096/A097)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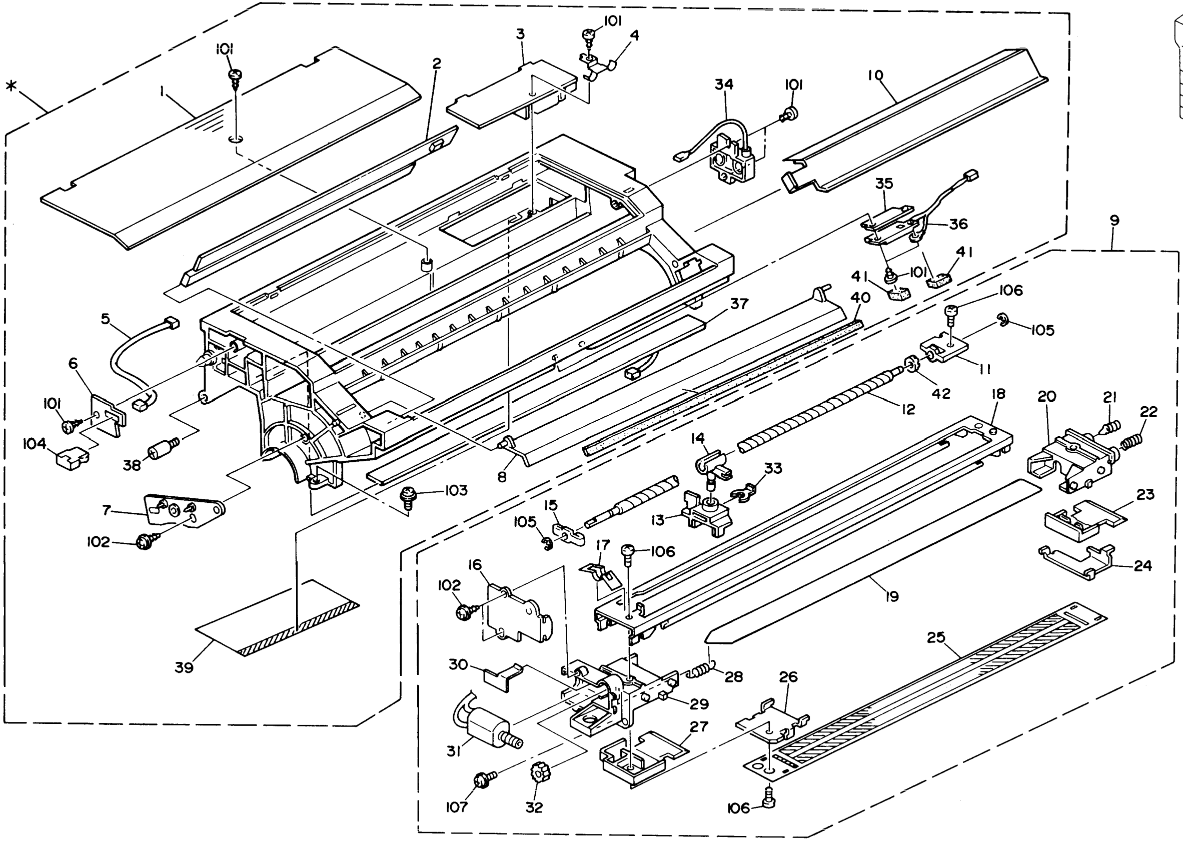
23. TONER BOTTLE HOLDER SECTION (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 3230	Shutter Joint	1
2	A096 3225	Bottle Stopper - A4	1
2	A096 3241	Bottle Stopper - LT	1
3	AA15 1798	Seal - 2x40x63	2
4	AA15 0355	Handle Bracket Cover	1
5	A096 3243	Lever Bushing	1
6	A096 3224	Bottle Roller	2
7	A096 3235	Holder Cover	1
8	AA15 1797	Holder Base Seal	1
9	A096 3222	Bottle Holder	1
10	A096 3236	Shutter Lever	1
11	AA06 6209	Shutter Spring	1
12	A096 3231	Shutter Lever	1
13	A096 3233	Holder Shutter	1
14	A096 3210	Bottle Hinge Bracket	1
15	A096 3401	Upper Hinge	1
16	AA06 3170	Drive Change Spring	1
17	AA13 2158	Collar	1
18	A096 3216	Bottle Holder Bracket	1
19	A096 3239	Development Inner Cover	1
20	A096 5325	Bottle Drive Motor - DC 5.2W	1
21	A096 3238	Toner Tray	1
22	A096 3217	DC Motor Bracket	1
23	AB01 5011	Gear - 32Z	1
24	AB01 7278	Gear - 14/40Z	1
25	A096 3404	Lower Hinge	1
26	AA14 3290	Stepped Screw - M4	1
27	AA00 1323	Decal - Bottle Shutter	1
28	AA00 1322	Decal - Bottle Set	1
29	AG07 0007	Magnet Catch	1
30	AA14 8361	Click Guide	1
31	AA15 1796	Stopper Seal	1
32	AA15 1795	Holder Seal	1
33	AA06 0262	Spring	1
34	A096 3245	Bottle Guide Plate	1

Index No.	Part No.	De p on	Q'ty Per Assembly
		MB9 (ADDED)	
101	0965 4008W	Tapping Screw With Flat Washer - M4x8	
102	0344 0080W	Philips Truss Head Screw - M4x8	
103	0720 0040B	Retaining Ring - M4	
104	0964 4008B	Tapping Screw With Flat Washer-M4x8	
105	1105 0263	Wire Saddle	
106	0725 0120B	Retaining Ring - M12	
107	0964 4012B	Tapping Screw With Flat Washer-M4	
108	0434 0080B	Philips Tapping Screw - M4x8	
109	0720 0060B	Retaining Ring - M6	
110	0313 0040B	Philips Pan Head Screw - M3x4	

24. DRUM UNIT 1 (A095/A096/A097)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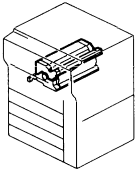
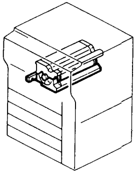


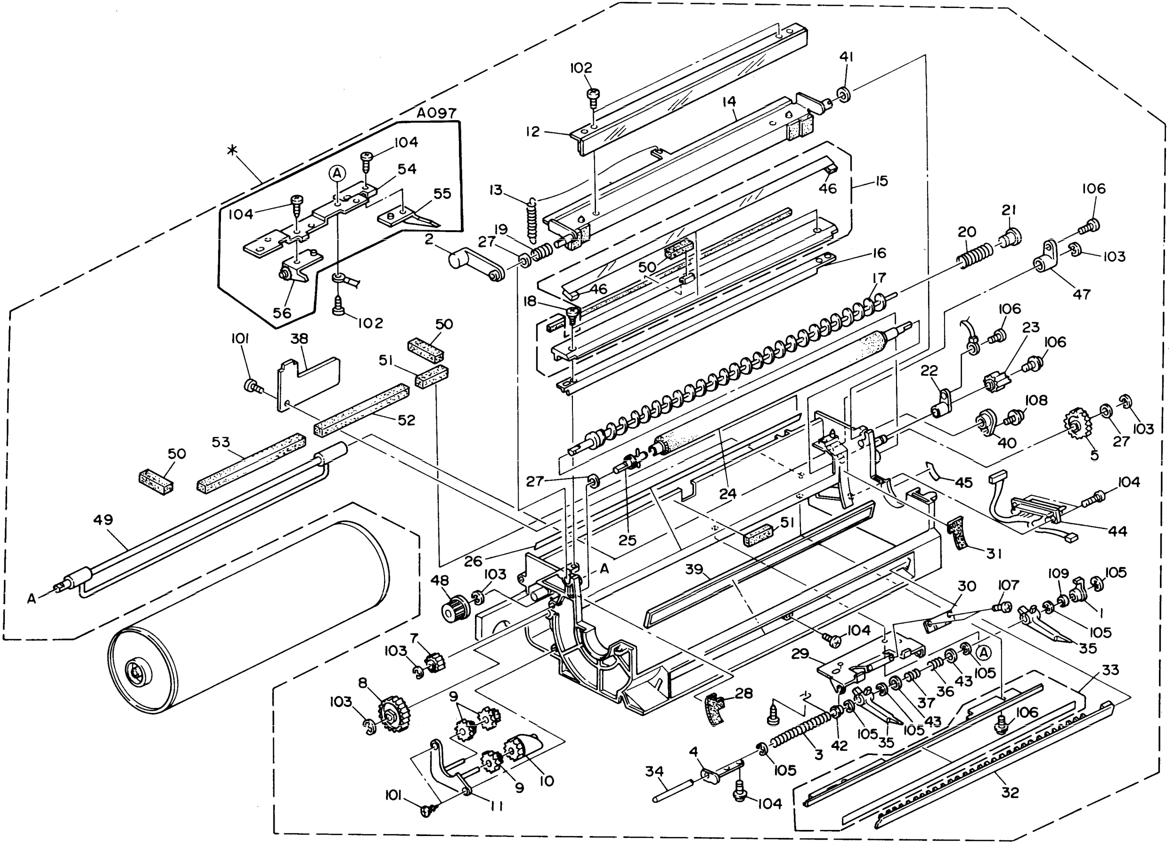
24. DRUM UNIT 1 **(A095/A096/A097)**

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 2251	Upper Drum Unit	1
1	A096 2260	Upper Unit Cover	1
2	A096 5210	Erase Lamp Unit	1
3	AZ32 0067	High-voltage Supply Board - C	1
4	A096 2271	Grounding Plate	1
5	A096 5442	Corona Cleaner Harness	1
6	A096 2282	Connector Bracket	1
7	A096 2266	Corona Unit Bracket	1
8	A096 2261	Eraser Cover	1
9	AD00 4069	Charge Corona Unit	1
10	A096 2302	Upper Drum Shield	1
11	AA08 0148	Rear Bushing	1
12	A096 2061	Screw Shaft	1
13	A096 2063	Corona Wire Cleaner	1
14	A096 2062	Wire Cleaner Slider	1
15	AA08 0147	Front Bushing	1
16	A096 2053	Cleaner Motor Cover	1
17	A096 2054	Grounding Plat	1
18	AD02 3106	Charge Corona Casing	1
19	AD02 0053	Charge Corona Wire	1
20	AD02 2285	Rear End Block	1
21	AA06 3248	Charge Terminal Spring	1
22	AA06 3249	Grid Terminal Spring	1
23	AD02 2286	Rear End Block Cover	1
24	A096 2051	Rear Grid Anchor	1
25	A096 2057	Charge Corona Grid	1
26	A096 2052	Front Grid Anchor	1
27	AD02 2284	'Front End Block Cover	1
28	5442 2108	Spring - Corona Wire	1
29	AD02 2283	Front End Block	1
30	A096 2055	Motor Grounding Plate	1
31	AX04 0061	Cleaner Motor - DC 0.5W	1
32	AB01 0087	Gear - 20Z	1
33	A096 2065	Slider Ring	1
34	AD02 1091	Charge Corona Receptacle	1

Index No.	Part No.	Description	Q'ty Per Assembly
35	A096 2301	Grounding Plate	1
36	AW33 0003	Drum Potential Sensor	1
37	A096 5320	Quenching Lamp	1
38	5409 1855	Mounting Pin	2
39	AA15 0350	Seal - 40x130	1
40	AA15 1802	Eraser Cover Seal	1
41	AA15 1780	Potential Sensor Cover	2
42	AA16 1034	Cleaner Cushion	1
		MB18 (ADDED)	
101	0413 0082W	Tapping Screw - M3x8	
102	0965 3008W	Tapping Screw With Washer - M3x8	
103	0951 4010W	Philips Screw With Flatwasher-M4xl10	
104	1102 6245	Connector - 2P	
105	0720 0025B	Retaining Ring - M2.5	
106	0971 4006A	Philips Polycarbonate Screw - M4x6	
107	0960 4006B	Philips Flange Screw - M4x6	

25. DRUM UNIT 2 (A095/A096/A097)

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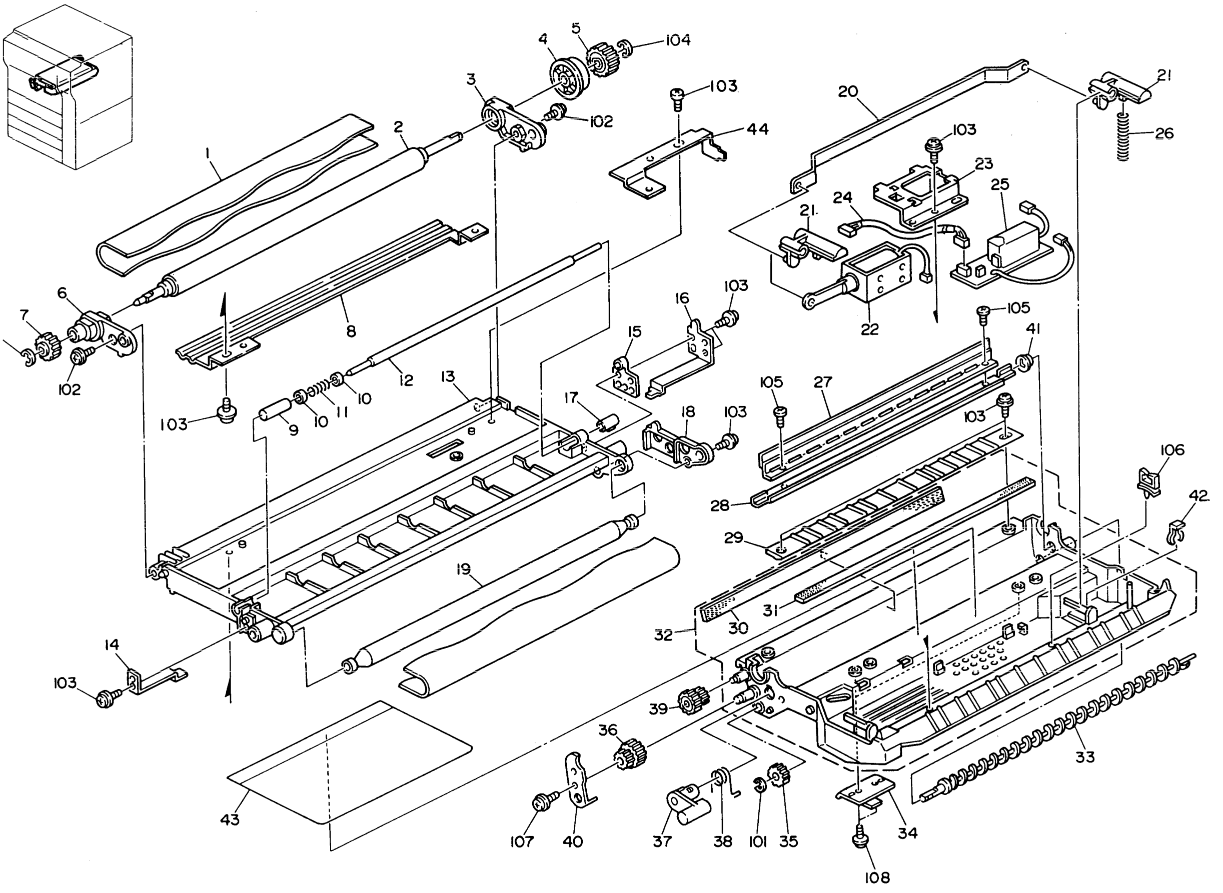
25. DRUM UNIT 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A097 3511	Lower Drum Unit (A097)	1
*	A097 3510	Lower Drum Unit (A095/A096)	1
	A096 3510	x/o MB7 (A095/A096)	
	A096 3500	x/o MB1 (A095/A096)	
1	AA08 0155	Rear Pawl Bushing	1
2	A096 3575	Blade Release Lever	1
3	AA06 3384	Pick-off Pawl Shaft Spring	1
	AA06 3373	Spring - 60mm x/o MB17	1
4	A096 3624	Drum Grounding Plate	1
5	AB01 7323	Cam Gear - 35Z	1
6	A096 9510	OPC Drum	1
7	A096 3588	Gear - 19Z	1
8	AB01 7296	Gear - 30/47Z	1
9	A096 3661	Gear - 15/35Z	3
10	AB01 7288	Cam Gear - 35Z	1
11	A096 3656	Gear Bracket	1
12	A096 3581	Cleaning Blade	1
13	5853 1190	Spring - Click Plate	1
14	A096 3565	Cleaning Blade Bracket	1
15	A096 3631	Cleaning Seal	1
16	A096 3607	Brush Roller Bracket	1
	A096 3606	Cleaning Brush Seal x/o MB11	
17	AD04 3030	Toner Collection Coil	1
18	5894 2540	Arm Screw	2
19	AA06 3380	Spring - 16mm	1
20	AA06 3374	Toner Receiving Spring	1
21	A096 3664	Toner Receiving Pipe	1
22	AA08 2045	Cleaning Brush Bushing	1
23	A096 3594	Joint Gear - 14Z	1
24	AD04 2023	Cleaning Brush	1
25	A096 3586	Cleaning Brush Drive Shaft	1
26	AA15 0344	Mylar Seal - 11x350	1
27	AA13 2024	Spacer - M6	3
28	AA15 2314	Front Drum Seal	1
29	A096 3642	Pick-off Pawl Bracket	1
30	A096 5220	ID Sensor Board	1
31	AA15 2323	Rear Drum Seal	1
32	A096 5315	Pre-transfer Lamp	1
33	A096 3621	Entrance Seal	1
34	A096 3646	Pick-off Pawl Shaft	1
35	AD02 5018	Pick-pawl	2
	AD02 5015	x/o MB7	
36	AA06 6215	Rear Pawl Spring	1
37	AA06 6214	Front Pawl Spring	1
38	A096 3666	Harness Cover	1
39	A096 3558	PTL Cover	1
40	AA08 0154	Rear Bushing	1
41	AA13 2025	Spacer - 1X8X12	1
42	5324 1658	Bushing- 4x8x4.5mm	1
43	A352 2138	Slide Collar - 0.6x4.5x6	2
44	A096 5440	Drum Unit Harness	1
45	A096 3677	PTL Harness Cover	1
46	AA15 1811	Inner Casing Seal	2
47	AA08 2059	Agitator Bushing	1
		MB11 (ADDED)	
48	AB01 0340	Gear - 32Z	1
		MB11 (ADDED)	
49	AD03 9057	Cleaning Agitator	1
		MB11 (ADDED)	
50	AA15 1925	Cleaning Seal 1	3
		MB15 (ADDED)	
51	AA15 1926	Cleaning Seal 2	2
		MB15 (ADDED)	
52	AA15 1927	Cleaning Seal 3	1
		MB15 (ADDED)	
53	AA15 1928	Cleaning Seal 4	1
		MB15 (ADDED)	
54	A097 3644	Transport Guide Bracket (A097)	1
55	A048 2274	Front Transport Bracket (A097)	1
56	A048 2277	Rear Transport Bracket (A097)	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0413 0082B	Tapping Screw - M3x8	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0720 0040B	Retaining Ring - M4	
104	0413 0062B	Tapping Screw - M3x6	
105	0720 0030B	Retaining Ring - M3	
106	0951 3006B	Philips Screw With Flat Washer-M3x6	
107	0960 3005B	Philips Flange Screw - M3 X 5	
108	0951 3005B	Philips Screw With Flat Washer M3x5	
109	0807 3092	Spacer - 4x5x3	

Index No.	Part No.	Description	Q'ty Per Assembly

26. TRANSFER SECTION (A095/A096/A097)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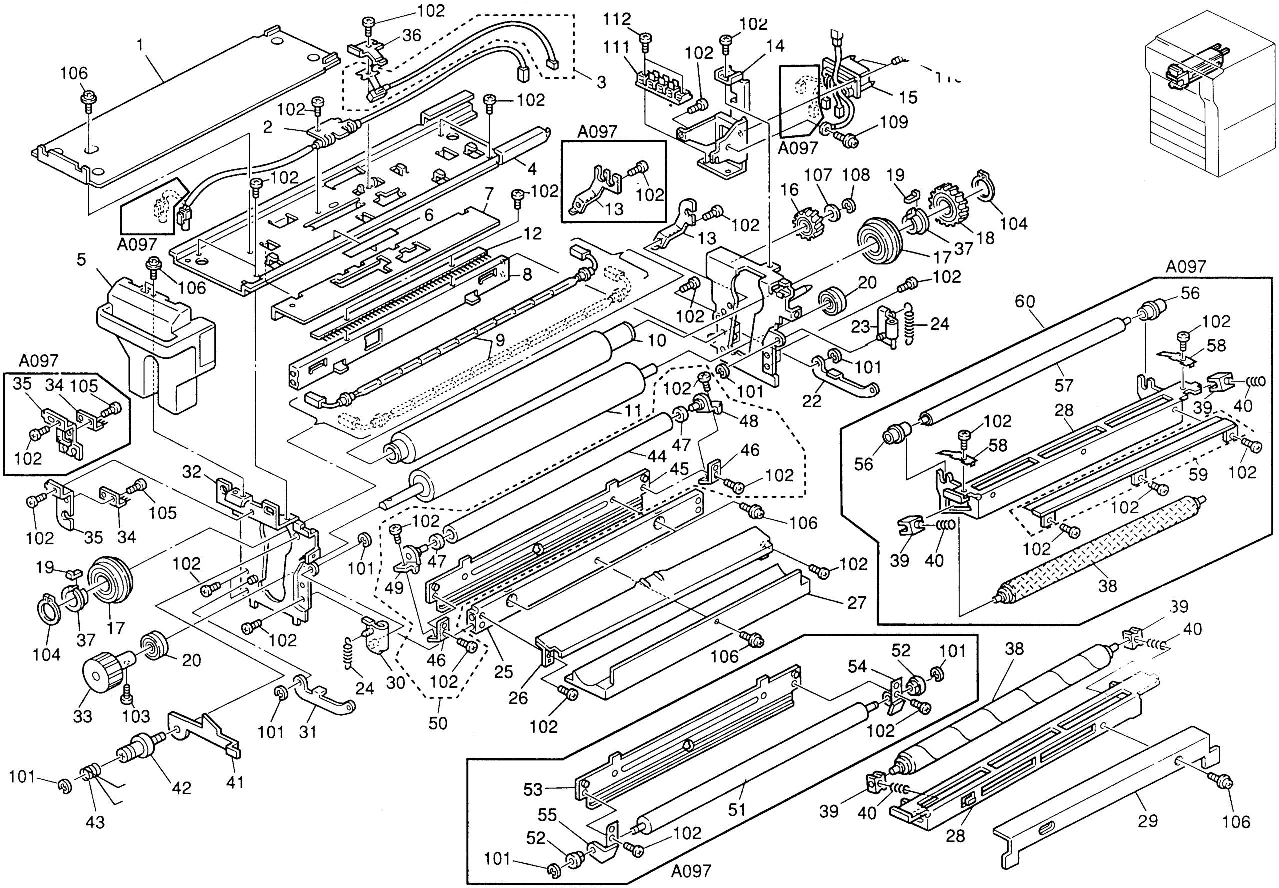
26. TRANSFER SECTION (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 3852	Transfer Belt	1
	A096 3851	x/o MB1	
2	A096 3875	Belt Drive Roller	1
3	A096 3862	Rear Arm	1
4	AA08 0157	Bushing - 8x32x9	1
5	AB01 0333	Gear - 26Z	1
6	A096 3861	Front Arm	1
7	AB01 3807	Gear - 20Z	1
8	A096 3856	Grounding Plate	1
9	A096 3867	Front Bushing - 4.5x6x21	1
10	A096 3863	Spacer - 4x6x1	2
11	G013 4566	Thermistor Spring	1
12	A096 3870	Transfer Bias Roller	1
13	A096 3853	Transfer Belt Frame	1
14	A096 3859	Front Spring Plate	1
15	A096 3864	Transfer Belt Terminal	1
16	A096 3860	Rear Spring Plate	1
17	A096 3868	Rear Bushing - 4.5x6x13.5	1
18	A096 3865	Terminal Cover	1
19	A096 3871	Belt Driven Roller	1
20	A096 3916	Belt Lever Arm	1
21	A096 3915	Transfer Belt Lever	2
22	A096 3911	Transfer Belt Solenoid	1
23	A096 3918	Solenoid Bracket	1
24	A096 5443	Transfer Unit Harness	1
25	AZ30 0036	High Voltage Supply Board - T	1
26	AA06 3489	Spring - 45mm	1
27	A096 3931	Belt Cleaning Blade	1
28	A096 3934	Cleaning Blade Stay	1
29	A096 3906	Rear Casing Guide	1
30	AA15 3376	Brush Seal - 4.5x17x358	1
31	AA15 1902	Belt Exit Seal	1
	AA15 3377	Brush Seal - 7x7.1x358 x/o MB2	
32	A096 3901	Transfer Belt Casing	1
33	AD04 3030	Toner Collection Coil	1

Index No.	Part No.	Description	Q'ty Per Assembly
34	A096 3907	Spring Plate	2
35	AB01 0334	Gear - 34Z	1
36	AB01 0335	Gear - 22/48Z	1
37	A096 3935	Transport Guide Holder	1
38	AA06 6239	Cleaning Blade Spring	1
	AA06 6217	x/o MB2	
39	AB01 0336	Gear - 22/36Z	1
40	A096 3929	Gear Cover	1
41	A096 3936	Blade Stay Bushing	1
42	5447 2681	Snap Ring	2
43	AA15 0632	Mylar Seal - 0.05x80x145	1
44	A096 3857	Grounding Terminal	1
101	0720 0040B	Retaining Ring - M4	
102	0951 3008B	Philips Screw With Flat Washer-M3x8	
103	0965 3008B	Tapping Screw With Washer - M3x8	
104	0720 0060B	Retaining Ring - M6	
105	0313 0060B	Philips Pan Head Screw - M3x6	
106	1105 0196	Harness Clamp	
107	0951 3006B	Philips Screw With Flat Washer-M3x6	
108	0965 3006B	Tapping Screw With Washer - M3x6	

27. FUSING UNIT 1 (A095/A096/A097)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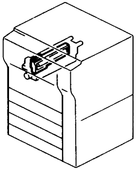
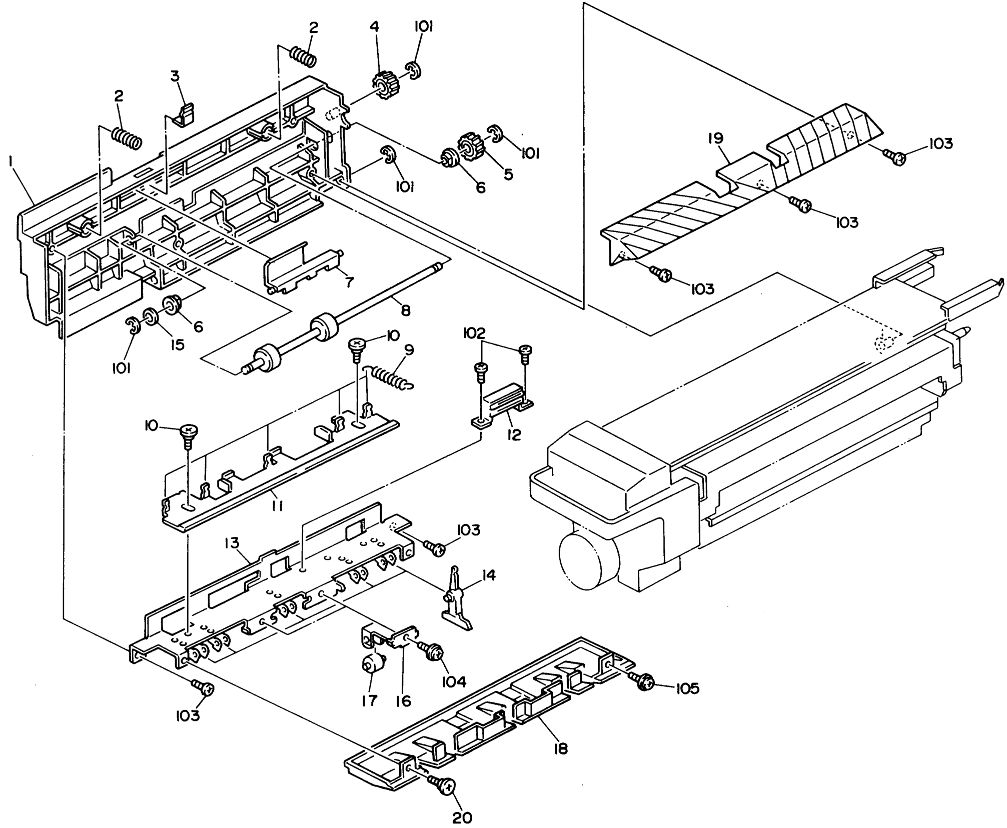
27. FUSING UNIT 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 4005	FusingUnit-220/230V (A095/A096)	1
*	A097 4007	FusingUnit-220/230V (A097)	1
*	A096 4003	FusingUnit-115V(A095/A096)	1
*	A097 4009	Fusing Unit- 115V(A097)	1
1	A096 41 55	Rail Cover	1
2	A096 4225	Thermofuse169°C	1
2	A097 4225	Thermofuse169°C - 120V(A097)	1
3	A096 4221	Thermistor	1
4	A096 4121	Fusing Unit Rail	1
5	A096 4151	Fusing Cover	1
6	5216 4145	Thermofuse Decal	1
7	AA17 2012	Heat Shielding Sheet	1
8	A096 4115	Fusing Left Stay	1
9	AX44 0070	Heater - 950W (220/230V) (A095/A096)	1
9	AX45 0014	Heater - 1100W (220/230V) (A097)	1
9	AX44 0069	Heater - 950W (115V) (A095/A096)	1
9	AX43 0021	Heater - 550W(120V) (A097)	2
10	AE01 1020	Hot Roller	1
11	AE02 0037	Pressure Roller	1
12	AA12 0005	Antistatic Brush	1
13	A096 4173	Rear Heater Holder	1
13	A097 4173	Rear Heater Holder - 120V (A097)	1
14	A096 4231	Fusing Connector Bracket	1
15	A096 5420	Fusing Unit Harness	1
15	A097 5420	Fusing Unit Harness - 120V (A097)	1
16	AB01 7357	Gear - 31Z	1
16	AB01 7292	x/o MB8	
17	AE03 0017	Ball Bearing - 35x50x10	2
18	AB01 3792	Gear - 49Z	1
19	AA12 0064	Antistatic Spacer	2
20	AE03 0018	Ball Bearing - 12x28x8	2
21	A096 4105	Rear Fusing Bracket	1
22	A096 4177	Rear Pressure Lever	1
23	A096 4185	Rear Release Bracket	1
24	AA06 0540	Pressure Spring (A095/A096)	2
24	AA06 0562	Pressure Spring (A097)	2
25	A096 4111	Fusing Right Stay	1
26	A096 4135	Lower Entrance Guide	1
27	A096 4161	Lower Fusing Cover	1
28	A097 4132	Upper Guide Bracket - 115V (A095/A096)	1
28	A096 4141	Upper Guide Bracket (A095/A096 EU,A097 NA)	1
28	A097 4141	Upper Guide Bracket (A097 EU)	1
29	A096 4131	Upper Entrance Guide	1
30	A096 4181	Front Release Bracket	1
31	A096 4175	Front Pressure Lever	1
32	A096 4101	Front Fusing Bracket	1
33	AG05 0066	Fusing Unit Knob	1
34	A413 1670	Antistatic Brush	1
35	A096 4171	Front Heater Holder	1
35	A097 4170	Front Heater Holder - 120V (A097)	1
36	A096 4224	Thermistor Pressuer Plate	1
37	AE03 2014	Bushing - 30x35x13.5	2
37	AE03 2011	o/o MB5	
38	AE04 0006	Oil Supply Roller (A095/A096)	1
38	AE04 0009	Oil Supply Roller (A095/A096 EU,A097)	1
39	AE03 1014	Bushing - Oil Supply Roller	2
40	AA06 3266	Pressure Spring -1KGF (A095/A096 EU,A097 NA)	2
40	AA06 3266	Pressure Spring - 1.8KGF (A097 EU)	2
41	A097 4133	Lock Lever	1
42	5215 4444	Pin	1
43	AA06 6232	Lock Lever Spring MB1 (OBS)	
44	AE04 2005	Fusing Cleaning Roller MB1 (OBS)	
45	A097 4252	Cleaning Roller Bracket MB1 (OBS)	
46	A097 4256	Spring Plate - Cleaning Roller MB1 (OBS)	
47	AE03 0020	Ball Bearing - 4x10x4 MB1 (OBS)	
48	A097 4258	Rear Hinge Bracket MB1 (OBS)	
49	A097 4254	Front Hinge Bracket MB1 (OBS)	
50	A097 4261	Fusing Cleaning Roller (A095/A096) MB1	1
51	AE04 2012	Lower Cleaning Roller (A097)	1
52	AA08 2063	Bushing - 8x10X5 (A097)	1
53	A097 4122	Cleaning Roller Bracket (A097)	1
54	A097 4126	Left Holder (A097)	1
55	A097 4129	Right Holder (A097)	1
56	AE03 1018	Bushing - 4x6x10 (A095/A096 EU,A097)	2
57	AE04 2007	Upper Cleaning Roller (A095/A096 EU,A097)	1
58	A096 4142	Spring Plate (A095/A096 EU,A097 NA)	2
58	A097 4142	Spring Plate (A097 EU)	2
59	A097 4143	Cleaning Roller Blade (A097 EU)	1
60	A096 4080	Oil Supply Unit (A095/A096 EU,A097 NA)	1
60	A097 4080	Oil Supply Unit (A097 EU)	1
101	0720 0040B	Retaining Ring - M4	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0314 0080B	Philips Pan Head Screw - M4x8	
104	0725 0300E	Retaining Ring C - M30	
105	0313 0050B	Philips Pan Head Screw - M3x5	
106	0951 4008W	Philips Screw With Flat Washer-M4x8	
107	0807 5056	Washer -8.1 mm	
108	0720 0060B	Retaining Ring - M6	
109	0950 3005M	Philips Screw With Lock Washer M3x5	
110	0313 0080B	Philips Pan Head Screw - M3x8	
111	1101 0473	Connector - 3P	
112	0314 0100B	Philips Pan Head Screw - M4x10	

28. FUSING UNIT 2 (A095/A096/A097)

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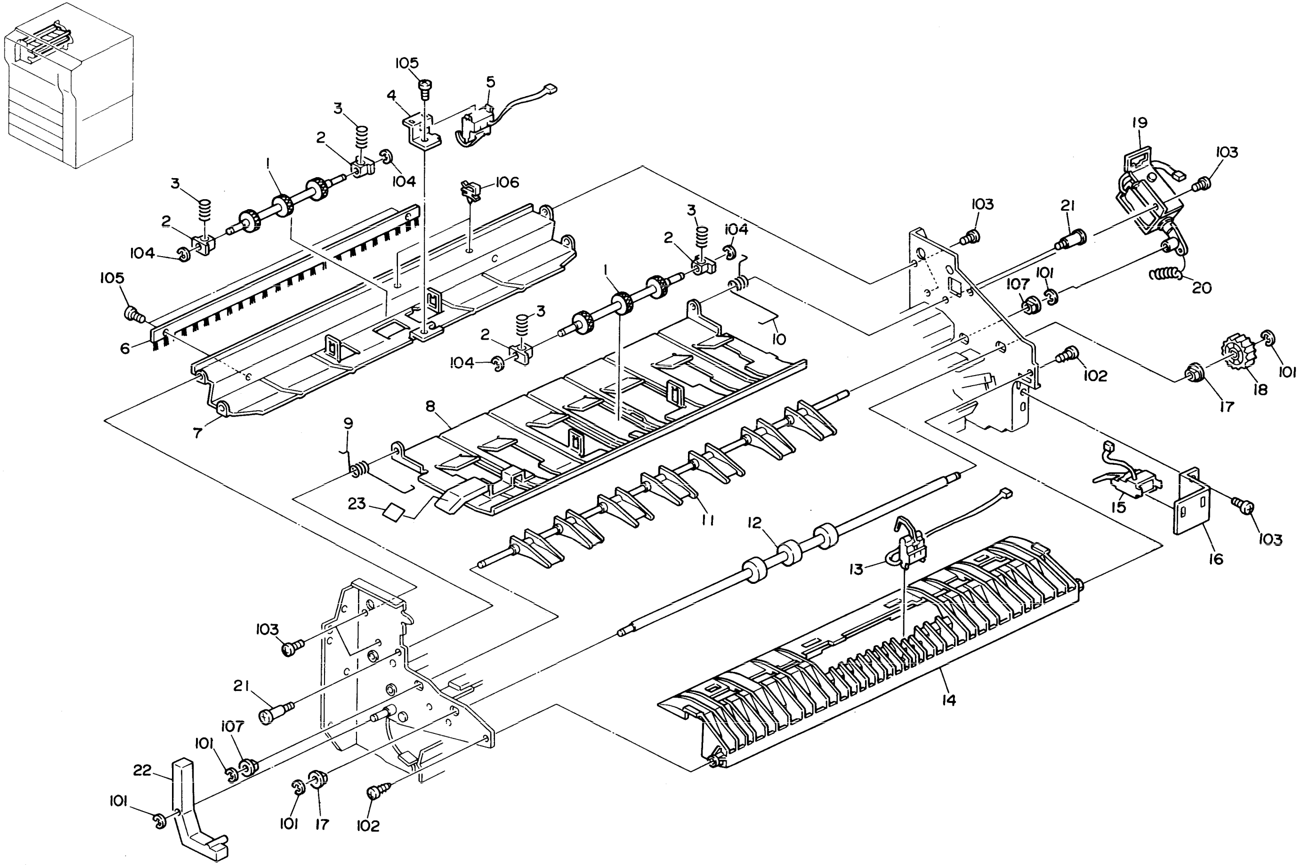
28. FUSING UNIT 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 4041	Fusing Exit Unit	1
1	A096 4301	Fusing Exit Cover	1
2	G619 4028	Slider Pressure Spring	2
3	A096 4304	Grip Spring Plate	1
4	AB01 3793	Gear - 19Z	1
5	AB01 3794	Gear - 19Z	1
6	AA08 0184	Bushing - Fusing Unit	2
	5424 4142	Bushing - Cleaning Roller o/o MB5	
7	A096 4303	Fusing Exit Grip	1
8	AF02 0302	Lower Fusing Exit Roller	1
9	AA06 0539	Stripper Pawl Spring	5
10	5506 6111	Stepped Screw - M4	2
11	A096 4316	Stripper Release Slider	1
12	AA02 1026	Magnet Catch	1
13	A096 4313	Stripper Stay	1
14	A096 9500	Hot Roller Stripper 5pcs/set	1
15	AA13 2024	Spacer - M6	1
16	A096 4319	Exit Roller Holder	2
17	AF02 1016	Lower Fusing Exit Roller	2
18	A096 4322	Upper Fusing Exit Guide	1
19	A096 4309	Lower Fusing Exit Guide	1
20	AA14 3037	Development Cover Screw	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040B	Retaining Ring - M4	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0414 0082W	Tapping Screw With Flat Washer-M4x8	
104	0951 4006B	Philips Screw With Washer - M4x6	
105	0960 4008W	Philips Flange Screw - M4x8	

29. INVERTER SECTION 1 (A095/A096/A097)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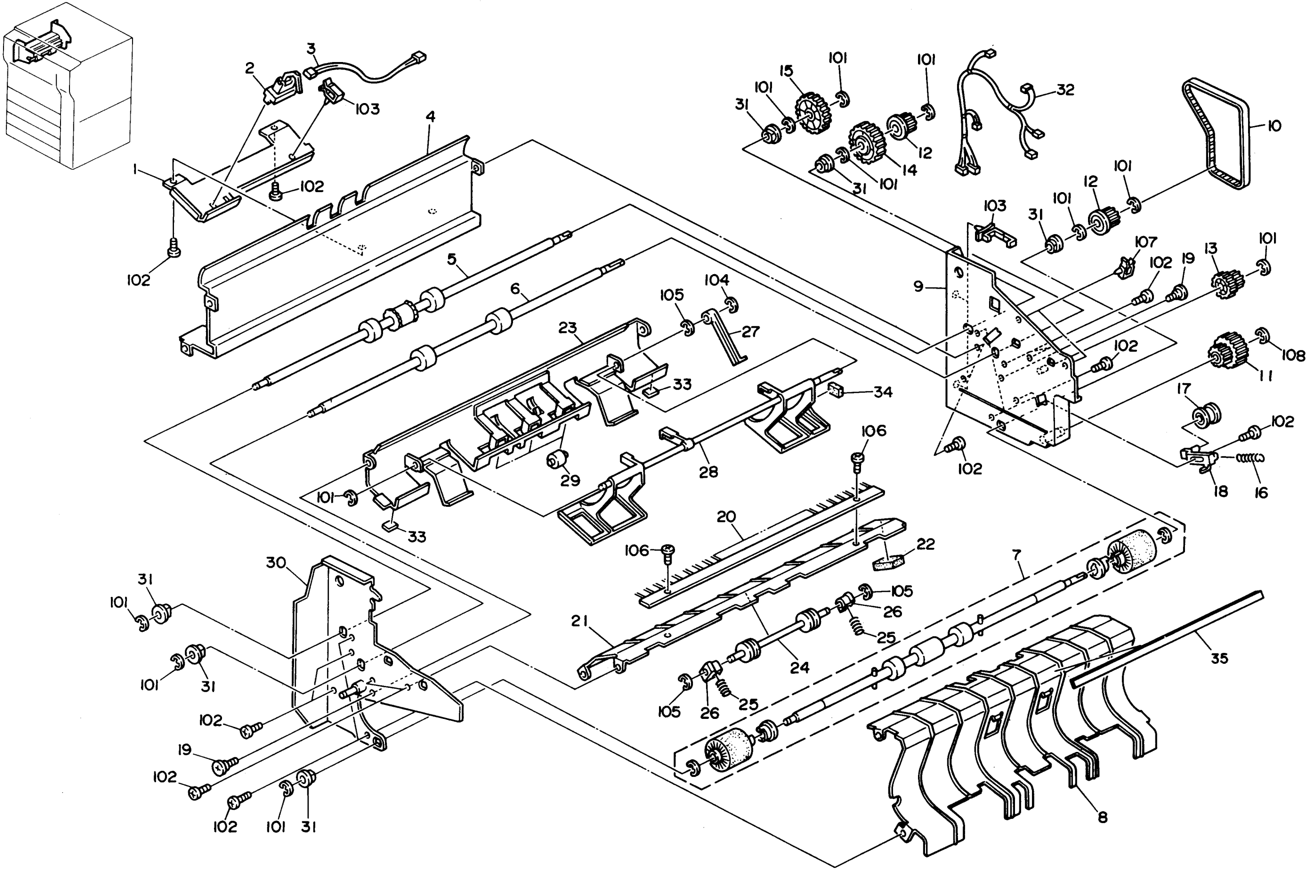
29. INVERTER SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AF02 2073	Exit Driven Roller	2
2	AA08 0034	Bushing - 4x5x7	4
3	5205 4527	Spring - Exit	4
4	A316 4513	Lower Exit Sensor Bracket	1
5	AW02 0057	Paper Exit Sensor	1
6	5206 2808	Antistatic Brush - Duplex Transport	1
7	A096 4423	Upper Exit Guide	1
8	A096 4487	Upper Exit Guide	1
9	AA06 6229	Left Guide Spring	1
10	AA06 6230	Right Guide Spring	1
11	A096 4472	Junction Gate	1
12	AF02 0303	Exit Transport Roller	1
13	AW02 0060	Entrance Exit Sensor	1
14	A096 4477	Lower Exit Guide	1
15	AW02 0064	Duplex Entrance Sensor	1
16	A096 4488	Entrance Sensor Bracket	1
17	AA08 2046	Bushing - 6x12x6	2
18	AB01 9474	Gear - 20Z	1
19	A096 4473	Junction Gate Solenoid	1
20	5413 1812	Spring - Drum Return Arm	1
21	AA14 3020	Stepped Screw - M4	2
22	A096 4495	Inverter Guide Lever	1
23	AA00 1331	Decal - E2	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040B	Retaining Ring - M4	
102	0414 0082W	Tapping Screw With Flat Washer-M4x8	
103	0434 0080B	Philips Tapping Screw - M4x8	
104	0720 0030B	Retaining Ring - M3	
105	0434 0060B	Philips Tapping Screw - M4x6	
106	1105 0283	Clamp	
107	0805 3384	Bushing - 5mm	

30. INVERTER SECTION 2 (A095/A096/A097)



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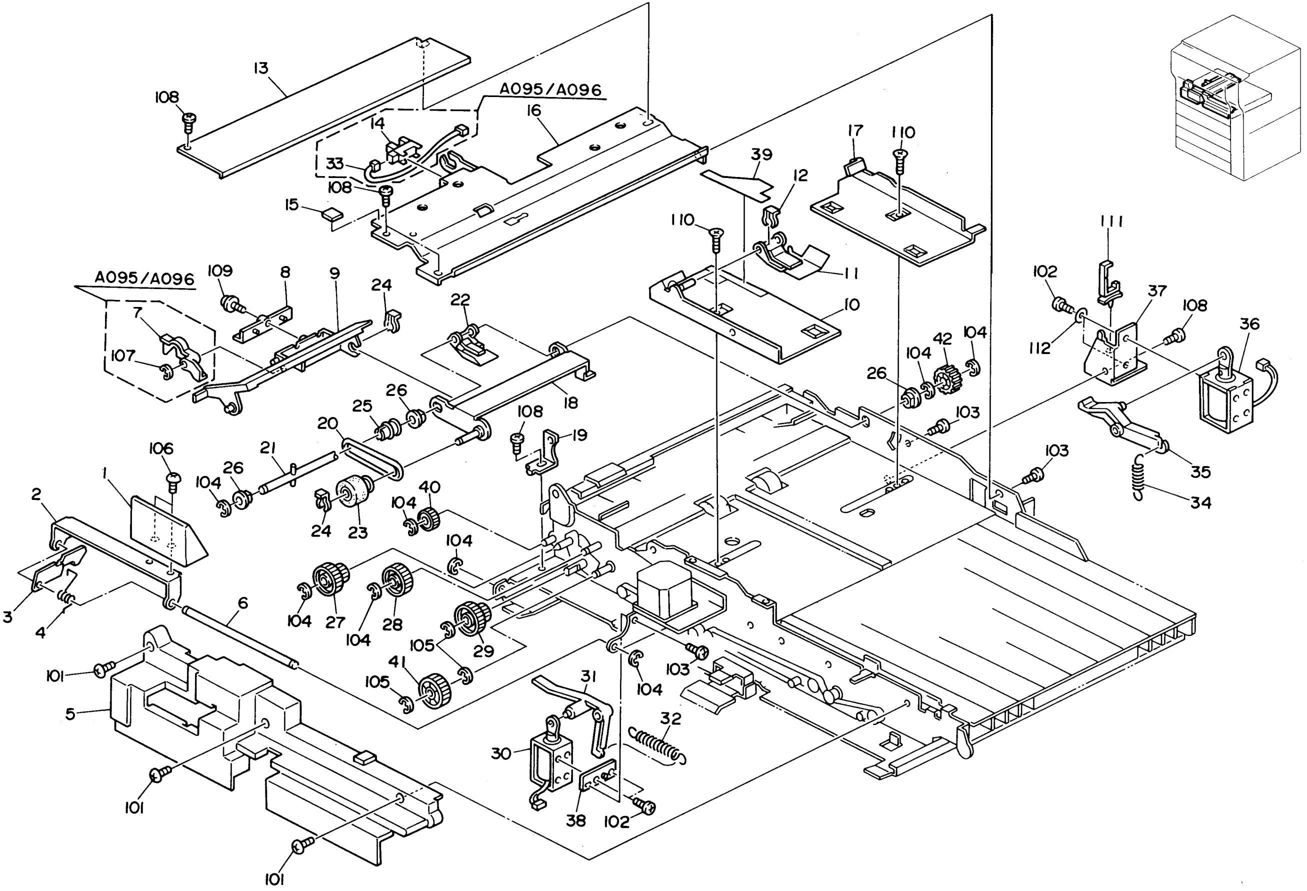
30. INVERTER SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 4468	Exit Sensor Bracket	1
2	AW02 0008	Photointerrupter	1
3	A096 5422	Exit Sensor Harness	1
4	A096 4417	Exit Cover	1
5	AF04 0048	Exit Drive Roller	1
6	AF02 0291	2nd Inverter Drive Roller	1
7	A096 4461	3rd Inverter Drive Roller (A095/A096)	1
7	A097 4461	3rd Inverter Drive Roller (A097)	1
8	A096 4457	Outer Inverter Guide	1
9	A096 4406	Rear Exit Bracket	1
10	AA04 3229	Timing Belt - 302P2M	1
11	AB01 7293	Pulley Gear - 27/29Z	1
12	AB03 0392	Pulley - 18Z	2
13	AB01 7294	Pulley Gear - 18/20Z	1
14	AB01 3795	Gear - 38Z	1
15	AB01 3796	Gear - 38Z	1
16	5360 1711	Pressure Spring	1
17	AB03 0395	Idle Pulley	1
18	A096 4427	Pulley Tightener	1
19	AA14 3074	Stepped Screw - M4x5	2
20	AA12 0065	Antistatic Brush - Duplex	1
21	A096 4453	Upper Inverter Guide	1
22	AA16 2056	Pad - 7x12x22	1
23	A096 4434	Inner Inverter Guide	1
24	AF02 2065	2nd Inverter Driven Roller	1
25	5205 4527	Spring - Exit	2
26	AA08 0034	Bushing - 4x5x7	2
27	A096 4446	Sensor Feeler	1
28	A096 4441	Inverter Weight	1
29	AF02 2066	Transport Driven Roller	3
30	A096 4408	Front Exit Bracket	1
31	AA08 2046	Bushing - 6x12x6	6
32	A096 5421	Exit Unit Harness	1
33	AA02 0001	Drawer Tray Magnet	2
34	AA16 1070	Cushion - 5x6.5x12	1

Index No.	Part No.	Description	Q'ty Per Assembly
35	AA15 1877	Outer Inverter Guide Seal	1
101	0720 0040B	Retaining Ring - M4	
102	0434 0080B	Philips Tapping Screw - M4x8	
103	1105 0278	Harness Clamp	
104	0720 0025B	Retaining Ring - M2.5	
105	0720 0030B	Retaining Ring - M3	
106	0434 0060B	Philips Tapping Screw - M4x6	
107	1105 0283	Clamp	
108	0720 0060B	Retaining Ring - M6	

31. DUPLEX UNIT 1 (A095/A096/A097)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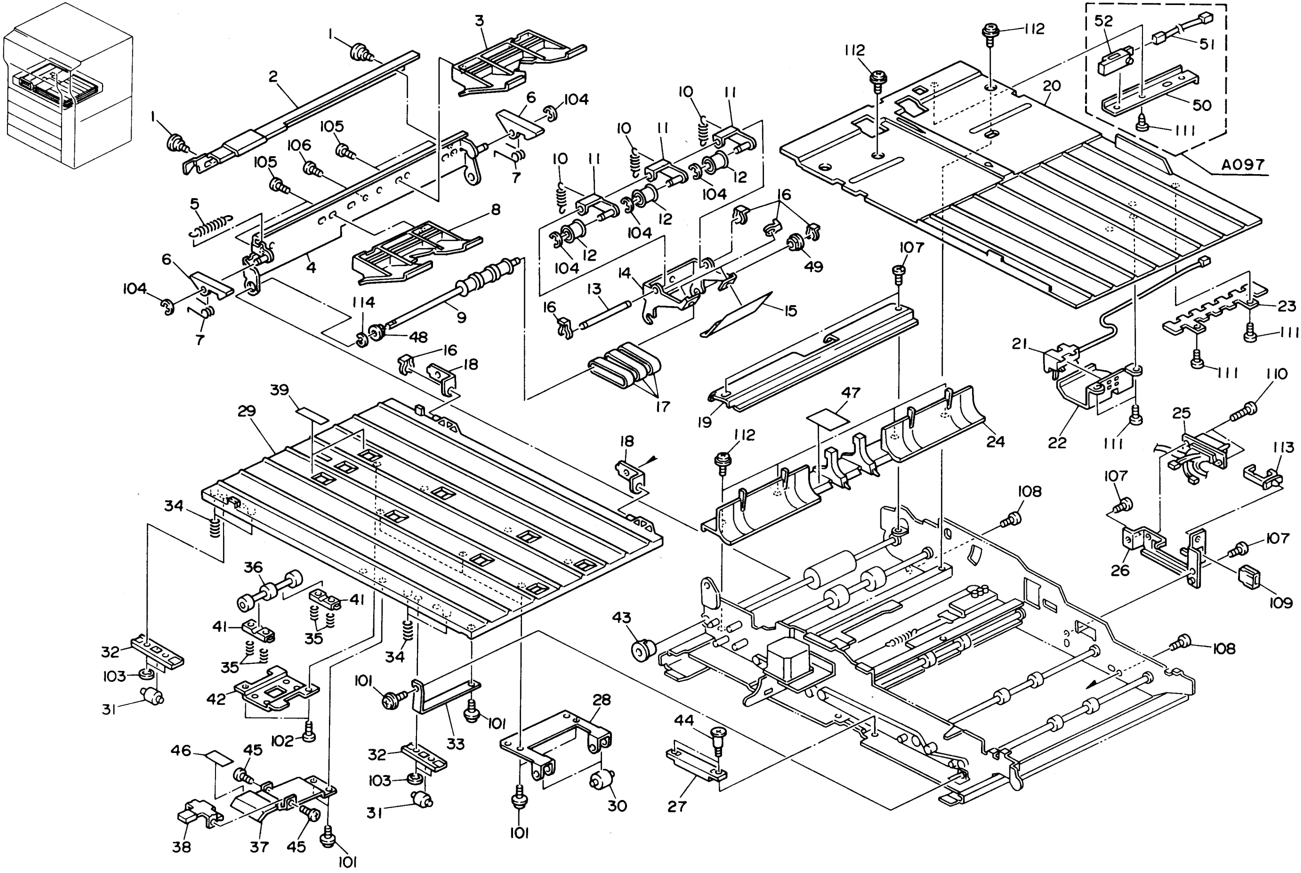
31. DUPLEX UNIT 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A096 4501	Duplex Unit (A095/A096)	1
*	A097 4502	Duplex Unit (A097)	1
1	A096 4884	Duplex Release Lever	1
2	A096 4882	Release Bracket	1
3	A096 4883	Duplex Lock Lever	1
4	AA06 6223	Grip Spring	1
5	A096 4912	Duplex Inner Cover	1
6	AA14 0504	Release Lever Shaft	1
7	A096 4649	Paper End Feeler (A095/A096)	1
8	A096 4650	Pressure Plate	1
9	A096 4646	Pressure Plate Arm	1
10	A096 4742	Front Jogger Fence	1
11	A096 4750	Front Paper Flatenner	1
12	5206 2686	Snap Ring	1
13	A096 4897	Harness Cover	1
14	AW02 0056	Photointerrupter - EE-SX4235A-P1 (A095/A096)	1
15	A469 2123	Rubber Cushion - 1x10x10mm	1
16	A096 4611	Feed Roller Stay	1
17	A096 4760	Rear Jogger Fence	1
18	A096 4622	Feed Roller Arm (A095/A096)	1
18	A097 4622	Feed Roller Arm (A097)	1
19	A096 4876	Front Support Bracket	1
20	AA04 2008	Pick-Up Belt	1
21	A096 4630	Feed Roller Shaft	1
22	A096 4765	Rear Paper Flatenner	1
23	AF03 1001	Duplex Positioning Roller	1
24	5447 2681	Snap Ring	2
25	AB03 3052	Pick-Up V Pulley	1
26	5053 0447	Bushing - 6mm	3
27	AB01 7298	Gear - 21/55Z	1
28	AB01 3802	Gear - 30Z	1
29	AB01 7297	Gear - 21/32z	1
30	A096 4673	Pressure Plate Solenoid	1
31	A096 4665	Release Lever - Pressure Plate	1
32	AA06 0537	Release Spring - Pressure Plate	1
33	A096 5432	Duplex Relay Harness (A095/A096)	1
34	AA06 0536	Release Spring - Feed Roller	1
35	A096 4666	Release Lever - Feed Roller	1
36	A096 4658	Feed Roller Solenoid	1
37	A096 4657	Solenoid Bracket	1
38	A096 4674	Solenoid Bracket	1
39	A096 4745	Front Jogger Fence Guide	1
40	GB01 3035	Gear - 28Z	2
41	AB01 0089	Gear - 35Z	1
42	AB01 3569	Gear - 20Z	1
101	0344 0060W	Philips Truss Head Screw - M4x6	
102	0313 0040B	Philips Pan Head Screw - M3x4	
103	0434 0060B	Philips Tapping Screw - M4x6	
104	0720 0040B	Retaining Ring - M4	
105	0720 0060B	Retaining Ring - M6	
106	0802 5094	Tapping Truss Head Screw - M4x8	
107	0720 0030B	Retaining Ring - M3	
108	0434 0080B	Philips Tapping Screw - M4x8	
109	0965 3008B	Tapping Screw With Washer - M3x8	
110	0323 0050B	Screw - M3x5	
111	1105 0278	Harness Clamp	
112	0701 0030B	Flate Washer - M3	

32. DUPLEX UNIT 2 (A095/A096/A097)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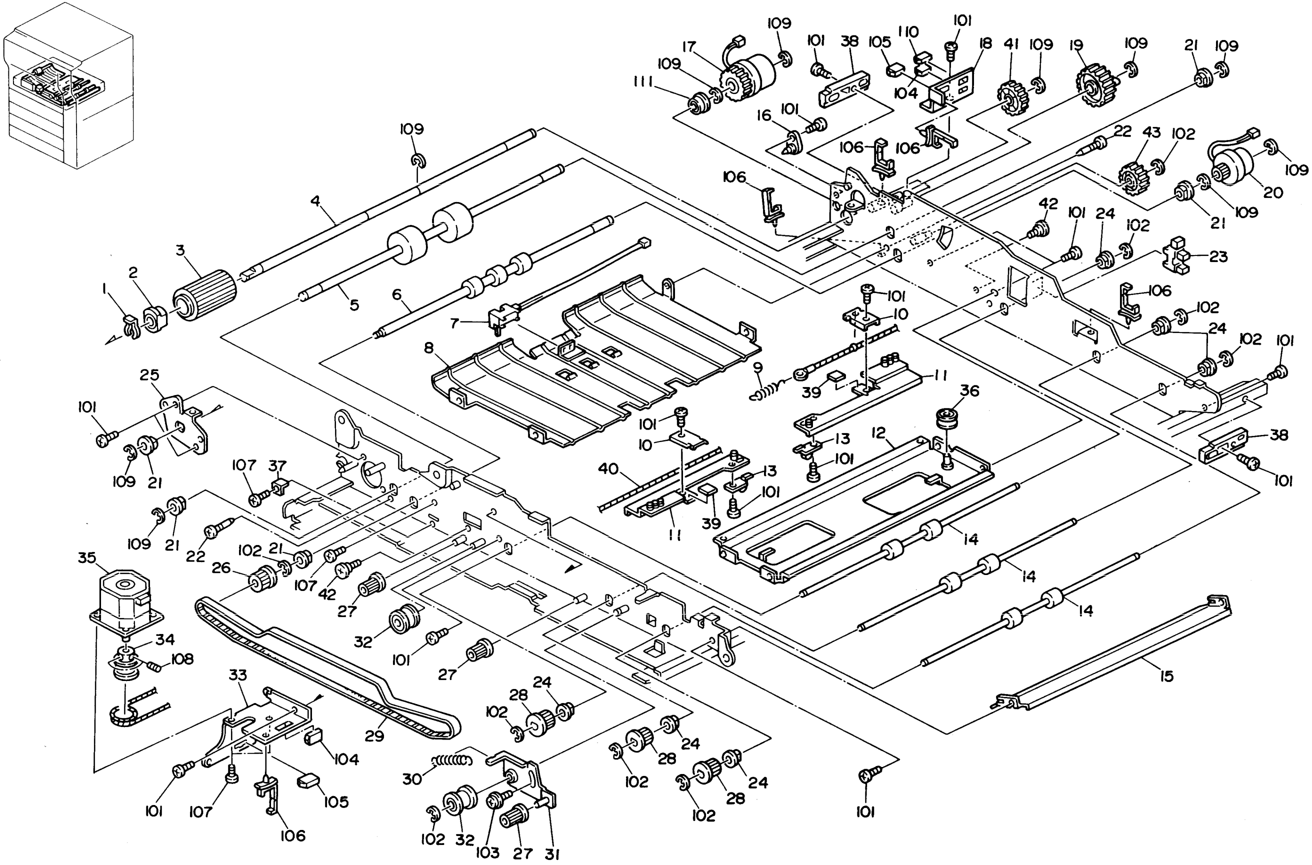
32. DUPLEX UNIT 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	H006 1091	Pin - Contact Point - Front	2
2	A096 4844	Release Lever	1
3	A096 4849	Rear Turn Guide (A095/A096)	1
3	A097 4849	Rear Turn Guide (A097)	1
4	A096 4836	Separation Belt Stay	1
5	AA06 0469	Lock Spring	1
6	A096 4840	Hook	2
7	AA06 6222	Hook Spring	2
8	A096 4848	Front Turn Guide (A095/A096)	1
8	A097 4848	Front Turn Guide (A097)	1
9	AF02 0297	Friction Belt Roller	1
10	AA06 0581	Spring - 18.8mm	3
	AA06 0276	Spring x/o MB1	
11	A096 4865	Friction Belt Lever	3
12	A499 1135	Tension Roller	3
13	AA14 5201	Friction Belt Shaft	1
14	A096 4861	Friction Belt Bracket	1
15	A096 4867	Separation Entrance Guide	1
16	5447 2681	Snap Ring	6
17	A096 9501	Duplex Friction Belt - 3pcs/set	1
18	A096 4935	Transport Guide Holder	2
19	A096 4810	Inner Separation Guide	1
20	A096 4731	Jogger Table	1
21	AW02 0059	Duplex Paper Sensor	1
22	A096 4732	Right Sensor Bracket	1
23	A096 4733	Sensor Harness Bracket	1
24	A096 4819	Lower Turn Guide	1
25	A096 5430	Duplex Unit Harness (A095/A096)	1
25	A097 7630	Duplex Unit Harness (A097)	1
26	A096 4894	Duplex Harness Bracket	1
27	AA02 1025	Magnet Catch	1
28	A096 4923	Right Spring Plate	3
29	A096 4927	Lower Transport Guide	1
30	AF02 2066	Transport Driven Roller	6
31	AF02 2067	Guide Stopper Roller	2

Index No.	Part No.	Description	Q'ty Per Assembly
32	A096 4924	Guide Plate Stopper	2
33	A096 4928	Guide Plate Band	1
34	5206 4478	Spring - Driven Roller	4
35	AA06 3378	Driven Roller Spring	4
36	AF02 0301	Guide Driven Roller	1
37	A096 4929	Guide Plate Lever	1
38	A096 4933	Guide Plate Lever Hook	1
40	A096 4937	Driven Roller Guide	3
41	A096 4925	Driven Roller Holder	2
42	A096 4926	Roller Holder Bracket	1
43	AA08 3003	Bushing - 6x18x5mm	1
44	AA14 3183	Stepped Screw	2
45	AA14 3307	Stepped Screw - M3x4	2
46	AA00 1324	Decal - Duplex Lever	1
47	AA15 0357	Seal - 31x35	1
48	AA13 2171	Spacer - 6x20x1	2
49	5053 0447	Bushing - 6mm	1
50	A097 4735	Harness Cover (A097)	1
51	A097 7631	Duplex Relay Harness (A097)	1
52	AW01 0050	Paper End Sensor (A097)	1
101	0965 4008B	Tapping Screw - M4x8	
102	0414 0082B	Binding Self Tapping Screw - M4x8	
103	0805 0083	Retaining Ring - M4	
104	0720 0040B	Retaining Ring - M4	
105	0434 0082B	Tapping Screw - M4x8	
106	0314 0080B	Philips Pan Head Screw - M4x8	
107	0434 0080B	Philips Tapping Screw - M4x8	
108	0434 0060B	Philips Tapping Screw - M4x6	
109	1102 6246	Connector - 3P	
110	0313 0080B	Philips Pan Head Screw - M3x8	
111	0413 0082B	Tapping Screw - M3x8	
112	0964 4008B	Tapping Screw With Flat Washer-M4x8	
113	1105 0278	Harness Clamp	
114	0720 0050B	Retaining Ring - M5	

33. DUPLEX UNIT 3 (A095/A096/A097)



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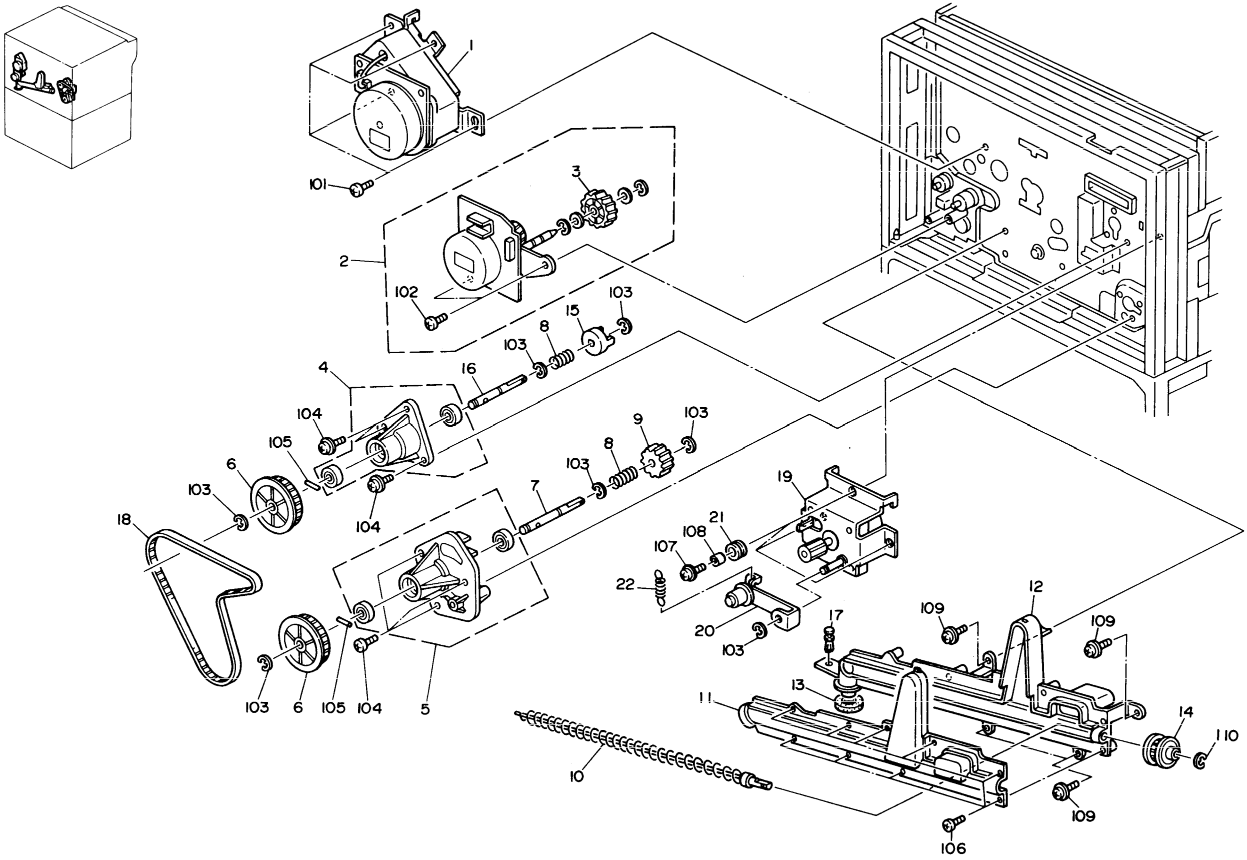
33. DUPLEX UNIT 3 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	5215 2621	Snap Ring - M6	1
2	AA08 3005	Roller Clutch - 8x18x11	1
3	AF03 2024	Separation Roller- Duplex	1
4	AA14 0503	Separation Roller Shaft	1
5	AF02 0296	Pick-up Roller	1
6	AF02 0293	Transport Drive Roller - Grip	1
7	AW02 0059	Duplex Paper Sensor	1
8	A096 4941	Upper Transport Guide	1
9	5206 2876	Spring - Wire	1
10	A096 4718	Wire Fixing Plate	2
11	A096 4715	Jogger Support Bracket	2
12	A096 4705	Lower Jogger Stay	1
13	A096 4711	Jogger Guide	2
14	AF02 0294	Transport Drive Roller	3
15	A096 4891	Lever Exit Guide	1
16	A060 2633	Guide Plate Holder	1
17	AX20 0092	Magnetic Clutch - Separation	1
18	A096 4896	Rear Left Harness Bracket	1
19	AB01 7291	Gear - 36Z	1
20	AX20 0091	Magnetic Clutch - Transport	1
21	5053 0223	Bushing - 8mm	5
22	5887 4162	Screw - Driven Guide Plate	2
23	AW02 0056	Photointerrupter - EE-SX4235A-P1	1
24	5053 0447	Bushing - 6mm	6
25	A096 4805	Gear Bracket	1
26	AB03 0429	Timing Pulley - 22Z	1
27	AB03 0430	Pulley - 16Z	3
28	AB03 0428	Timing Pulley - 20Z	3
29	AA04 3228	Timing Belt - 710P2M6	1
30	AA06 0328	Pressure Spring	1
31	A096 4901	Transport Tightener	1
32	AB03 0431	Transport Pulley	2
33	A096 4693	Jogger Motor bracket	1
34	AB03 2031	Jogger Pulley	1
35	AX05 0061	Jogger Motor - DC 6.5W	1
36	AB03 2030	Pulley	1
37	A096 4936	Guide Positioning Plate	1
38	A096 4595	Duplex Guide	2
39	A469 2123	Rubber Cushion - 1x10X10mm	2
40	AA05 0058	Jogger Drive Wire	1
41	AB01 3467	Gear - 30Z	1
42	AA14 3074	Stepped Screw - M4x5	2
43	GB01 3035	Gear - 28Z	1
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0720 0040B	Retaining Ring - M4	
103	0951 4008B	Philips Screw With Washer - M4x8	
104	1102 6249	Connector - 6P	
105	1102 6245	Connector - 2P	
106	1105 0278	Harness Clamp	
107	0313 0050B	Philips Pan Head Screw - M3x5	
108	0574 0050E	Hexagon Headless Set Screw - M4x5	
109	0720 0060B	Retaining Ring - M6	
110	1102 6246	Connector - 3P	
111	0805 3291	Ball Bearing - 8x16x5mm	

34. DRIVE SECTION 1 (A095/A096/A097)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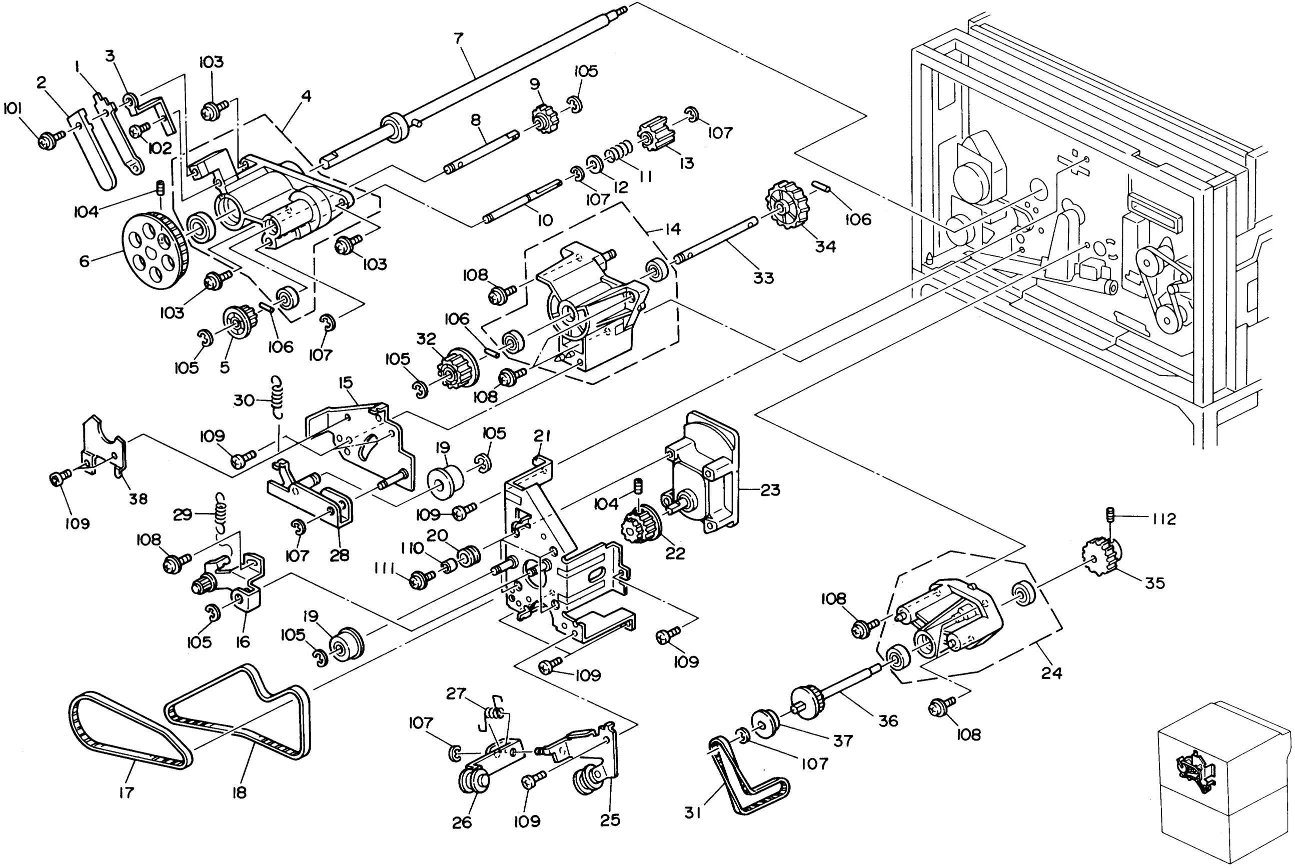
34. DRIVE SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 5305	Development Drive Motor - DC 4.1 W (A095/A096)	1
1	A097 5305	Development Drive Unit (A097)	1
2	A096 5307	Paper Feed Motor - DC 10.7/8.22W	1
3	AB01 1131	Gear - 48Z	1
4	A096 1165	Fusing Drive Bracket	1
5	A096 1155	Duplex Drive Bracket	1
6	AB03 0427	Pulley - 81Z	2
7	AA14 5213	Duplex Drive Shaft	1
8	AA06 3490	Spring -21.6mm	2
9	AB01 7290	Joint Gear - 31Z	1
10	AD04 3031	Toner Collection Coil	1
11	A096 3688	Rear Collection Casing	1
12	A096 3681	Front Collection Casing	1
13	AA15 1814	Joint Seal - 21x32x10	1
14	AB03 0416	Timing Pulley - 40Z	1
15	A096 1173	Fusing Drive Joint	1
	A096 1169	x/o MB8	
16	AA14 5214	Fusing Drive Shaft	1
17	A096 3697	Ratch	1
18	AA04 3346	Timing Belt - 560P2M6	1
19	A096 5306	Brushless Motor -DC 16W (A095/A096)	1
19	A097 5306	Brushless Motor -DC 24V 29.6W (A097)	1
20	A096 1172	Tightener	1
	A096 1170	x/o MB2	
21	AA16 1014	Cushion Motor	3
22	AA06 0244	Spring	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0060B	Philips Tapping Screw - M4x6	
102	0434 0080B	Philips Tapping Screw - M4x8	
103	0720 0060B	Retaining Ring - M6	
104	0964 4008B	Tapping Screw With Flat Washer-M4x8	
105	0623 0140E	Spring Pin - 3x14mm	
106	0414 0082B	Binding Self Tapping Screw - M4x8	
107	0951 4010B	Philips Screw With Washer - M4x10	
108	0707 4050	Bushing - 4x5	
109	0960 4006B	Philips Flange Screw - M4x6	
110	0720 0040B	Retaining Ring - M4	

35. DRIVE SECTION 2 (A095/A096/A097)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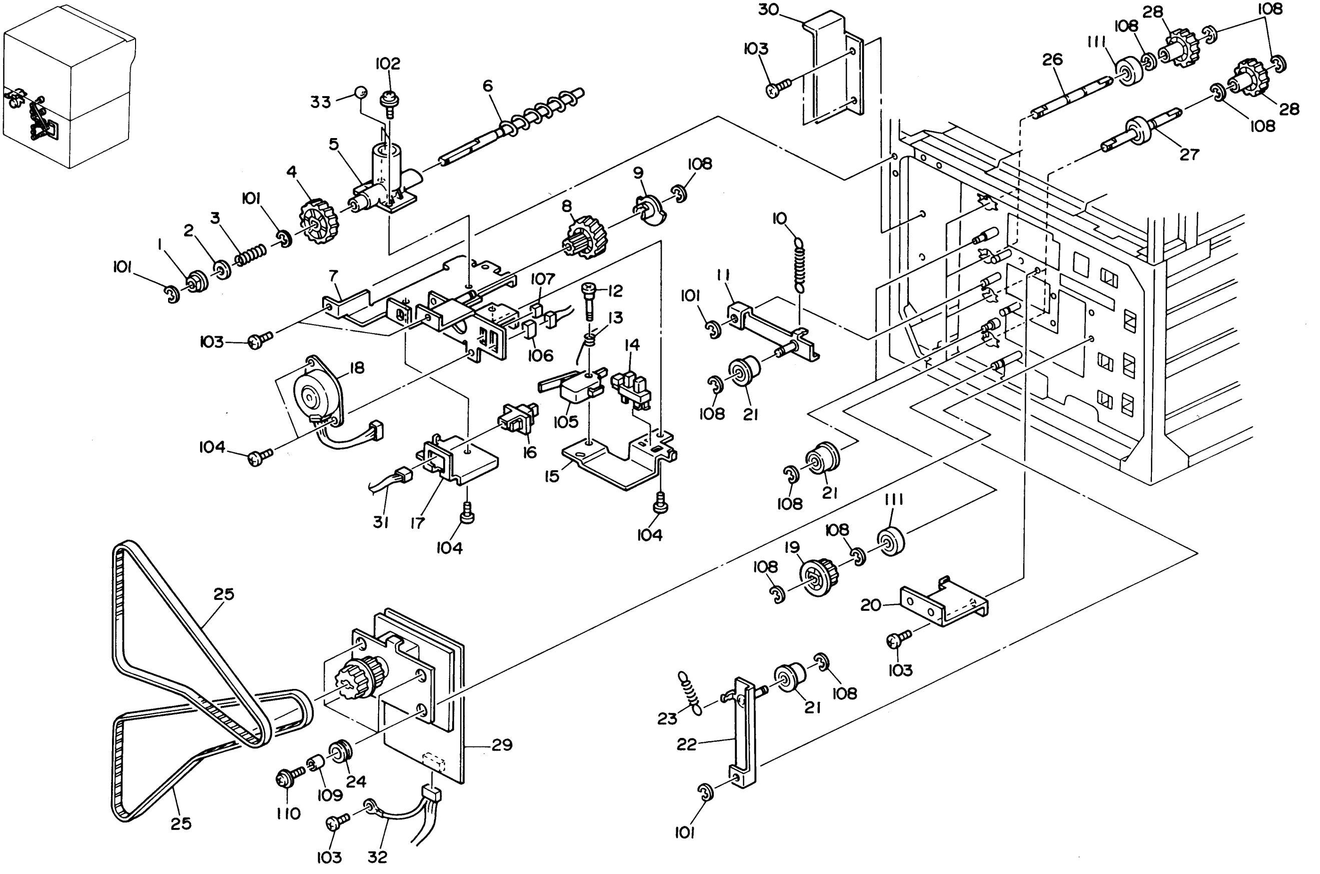
35. DRIVE SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 2341	Drum Grounding Plate	1
2	A096 2342	Grounding Plate Cover	1
3	A096 2317	Bearing Grounding Plate	1
4	A096 2314	Drum Shaft Stay	1
5	AB03 0415	Pulley - 25Z	1
6	A096 2316	Drum Pulley - 125Z	1
7	A096 2311	Drum Shaft	1
8	AA14 5204	Cleaning Drive Shaft	1
9	AB01 3772	Gear - 20Z	1
10	AA14 5205	Cleaning Relay Shaft	1
11	AA06 3490	Spring -21.6mm	1
12	AA13 2024	Spacer - M6	1
13	AB01 7287	Joint Gear - 16Z	1
14	A096 1128	Registration Drive Bracket	1
15	A096 1143	Drive Support Bracket	1
16	A096 1115	Tightener	1
17	AA04 3223	Timing Belt - 426P2M4	1
18	AA04 3222	Timing Belt - 525P3M6	1
19	AB03 2716	Idle Pulley - Ml 8	2
20	AA16 1014	Cushion Motor	4
21	A096 1112	Main Motor Bracket	1
22	AB03 3048	Timing Pulley - 31/32Z	1
23	AX06 0072	Main Motor - DC 21 W (A095/A096)	1
23	AX06 0095	Main Motor - DC 24V 27W (A097)	1
24	A096 1123	Belt Drive Bracket	1
25	A096 1133	Timing Belt Bracket	1
26	A096 1136	Tightener	1
27	AA06 6220	Tension Spring - 0.3	1
28	A096 1146	Tightener Lever	1
29	AA06 0532	Tension Spring - 24.5mm	1
30	AA06 0543	Tension Spring - 34.4mm	1
31	AA04 3224	Timing Belt -310P2M3	1
32	AB03 0414	Pulley - 25Z	1
33	AA14 5203	Registration Drive Shaft	1
34	AB01 3771	Gear - 32Z	1

Index No.	Part No.	Description	Q'ty Per Assembly
35	AB01 3770	Gear - 24Z	1
36	A096 1125	Belt Drive Shaft	1
37	AB03 0458	Pulley - 28Z	1
38	A096 1149	Support Plate - Cleaning Drive	1
101	0414 0082B	Binding Self Tapping Screw - M4x8	
102	0413 0062W	Tapping Screw - M3x6	
103	0964 4012B	Tapping Screw With Flat Washer-M4	
104	0574 0050E	Hexagon Headless Set Screw - M4x5	
105	0720 0060B	Retaining Ring - M6	
106	0633 0160E	Pin - 3x16mm	
107	0720 0040B	Retaining Ring - M4	
108	0964 4008B	Tapping Screw With Flat Washer-M4x8	
109	0434 0080B	Philips Tapping Screw - M4x8	
110	0707 4050	Bushing - 4x5	
111	0951 4010B	Philips Screw With Washer - M4x10	
112	0573 0050E	Hexagon Headless Set Screw - M3x5	
		MB3 (ADDED)	

36. DRIVE SECTION 3 (A095/A096/A097)



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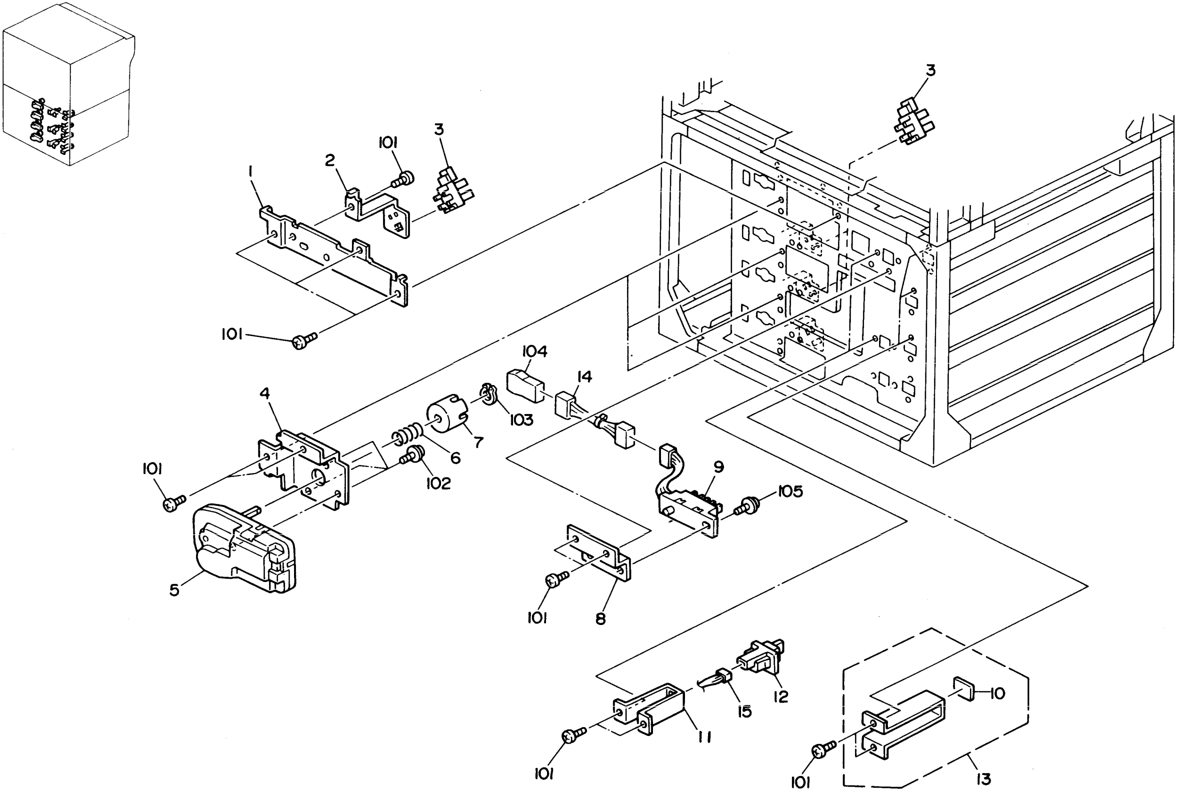
36. DRIVE SECTION 3 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	5053 0709	Bushing - 6x10x6mm	1
2	AA13 2024	Spacer - M6	1
3	AA06 3375	Spring - 24.3mm	1
4	AB01 1129	Gear - 45Z	1
5	A096 3729	Toner Collection Joint	1
6	AD04 3032	Toner Collection Coil	1
7	A096 3722	Toner Collection Bracket	1
8	AB01 7289	Gear - 17/45Z	1
9	A096 3752	Shutter Plate	1
10	AA06 0525	Tension Spring - 43MM	1
11	A096 6188	Upper Tightener - P/B	1
12	A423 4432	Shoulder Screw - M2.5	1
13	A423 4433	Spring	1
14	AW02 0056	Photointerrupter - EE-SX4235A-P1	1
15	A096 3742	Sensor Bracket	1
16	AW50 0012	Push Switch	1
17	A096 3763	Push Switch Bracket	1
18	A096 5330	Toner Collection Motor - DC 12W	1
19	AB03 0391	Timing Pulley - 22Z	4
20	A096 5517	Angle - DC PSU Board	1
21	AB03 2716	Idle Pulley - M18	3
22	A096 6186	Lower Tightener - P/B	1
23	AA06 0524	Tension Spring - 24.8mm	1
24	AA16 1014	Cushion Motor	4
25	AA04 3344	Timing Belt - P3M675	2
26	AA14 5212	Upper Drive Shaft - P/F	2
27	A096 6198	Paper Feed Drive Shaft	2
28	AB01 3781	Gear - 30Z	4
29	A096 5308	Bank Drive Motor - DC 23.5W	1
30	A096 3715	Tank Cover	1
31	A096 5414	Toner Collection Harness	1
32	A095 5413	Motor Control Harness (A095)	1
32	A096 5413	Motor Control Harness (A096)	1
33	A096 3736	Steel Ball - M11 MB4 (ADDED)	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040B	Retaining Ring - M4	
102	0960 4006B	Philips Flange Screw - M4x6	
103	0434 0080B	Philips Tapping Screw - M4x8	
104	0314 0060B	Philips Pan Head Screw - M4x6	
105	1204 2363	Microswitch - AH735454N	
106	1102 6250	Connector - 7P	
107	1102 6248	Connector - 5P	
108	0720 0060B	Retaining Ring - M6	
109	0707 4050	Bushing - 4x5	
110	0960 4012B	Philips Flange Screw - M4 X 12	
111	0742 3808	Ball Bearing - 8x16x5	

37. DRIVE SECTION 4 (A095/A096/A097)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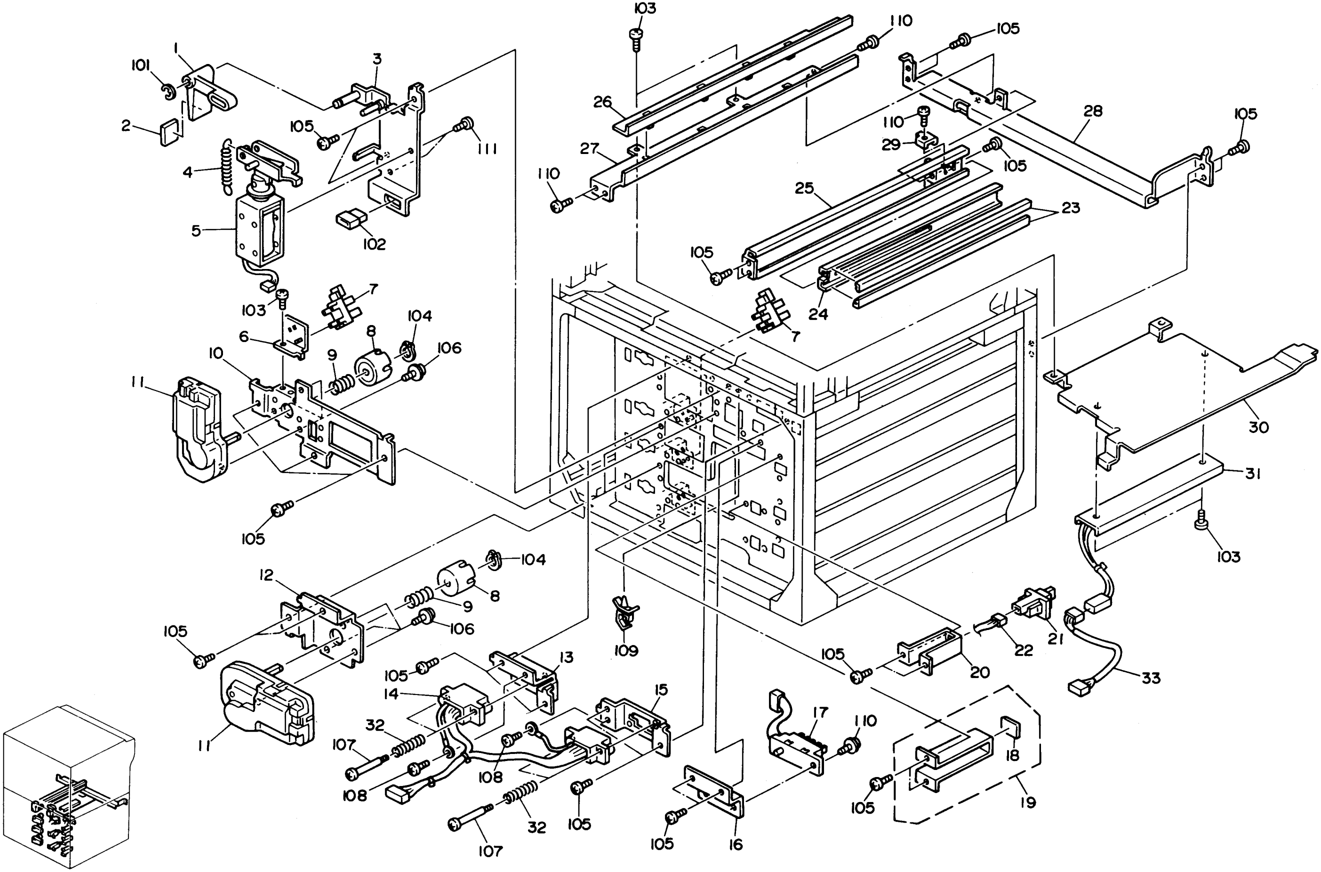
37. DRIVE SECTION 4 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 6171	Sensor Support Plate	1
2	A096 6172	Volume Sensor Bracket	1
3	AW02 0056	Photointerrupter - EE-SX4235A-P1	2
4	A096 6168	Lift Motor Bracket	3
5	AX04 0063	Tray Lift Motor -DC 3.6W	3
6	AA06 3167	Pressure Spring	3
7	A096 6169	Lift Motor Joint	3
8	A096 6177	Paper Size Bracket	1
9	AW50 0010	Push Switch	1
10	AA16 1096	Stopper Cushion	2
11	A096 6164	Push Switch Bracket	2
12	AW50 0012	Push Switch	2
13	A096 6174	Paper Tray Stopper	2
14	A096 5416	Paper Size Harness	1
15	A096 5415	Tray Set Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0965 4010B	Tapping Screw - M4 X 10	
103	0727 0080	C-ring - M8	
104	1102 6249	Connector - 6P	
105	0951 3008B	Philips Screw With Flat Washer-M3x8	

38. DRIVE SECTION 5 (A095/A096/A097)



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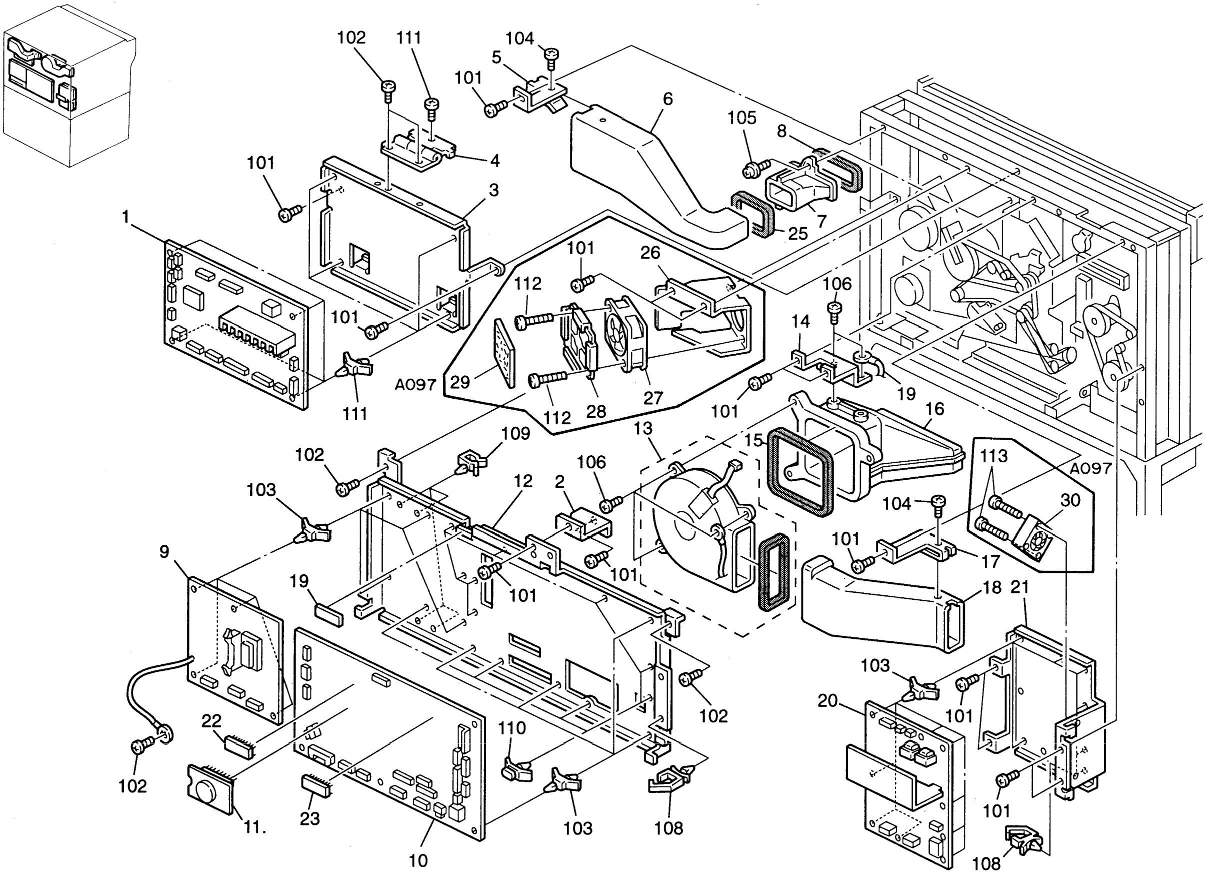
38. DRIVE SECTION 5 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 6687	Lock Solenoid Arm (A096/A097)	1
3	A096 6681	Lock Solenoid Bracket (A096/A097)	1
4	AA06 0535	Lock Solenoid Spring (A096/A097)	1
5	A096 6683	Tray Lock Solenoid (A096/A097)	1
6	A096 6691	Sensor Bracket (A096/A097)	1
7	AW02 0056	Photointerrupter - EE-SX4235A-P1 (A096/A097)	3
8	A096 6169	Lift Motor Joint (A096/A097)	3
9	AA06 3167	Pressure Spring (A096/A097)	3
10	A096 6170	Support Side Plate (A096/A097)	1
11	AX04 0063	Tray Lift Motor - DC 3.6W (A096/A097)	3
12	A096 6168	Lift Motor Bracket (A096/A097)	2
13	A096 6689	Right Connector Bracket (A096/A097)	1
14	A096 5417	Tandem Tray Harness (A096/A097)	1
15	A096 6690	Left Connector Bracket (A096/A097)	1
16	A096 6177	Paper Size Bracket (A096/A097)	1
17	AW50 0010	Push Switch (A096/A097)	1
18	AA16 1096	Stopper Cushion (A096/A097)	1
19	A096 6174	Paper Tray Stopper (A096/A097)	1
20	A096 6164	Push Switch Bracket (A096/A097)	1
21	AW50 0012	Push Switch (A096/A097)	1
22	A096 5415	Tray Set Harness (A096/A097)	1
23	A096 6274	Middle Rail 1	2
24	A096 6273	Middle Rail Stay	1
25	A096 6271	Middle Stay 1	1
26	A096 6277	Middle Slide Rail 2	1
27	A096 6276	Middle Stay 2	1
28	A096 6270	Tandem Tray Stay	1
29	A096 6278	Middle Rail Stopper	1
30	A096 6101	Upper Heat Sink	1
31	AX40 0022	Anti-condensation Heater - 240V 18W	1
31	AX40 0021	Anti-condensation Heater-115V 18W	1
32	AA06 3268	Connector Spring	4
33	A096 5463	Anticondensation Heater Harness 2	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040B	Retaining Ring - M4	
102	1102 6245	Connector - 2P	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	0727 0080	C-ring - M8	
105	0434 0080B	Philips Tapping Screw - M4x8	
106	0965 4010B	Tapping Screw - M4 X 10	
107	0803 0058	Stepped Screw	
108	0950 4008M	Screw - M4x8	
109	1105 0291	Wire Saddle	
110	0434 0060B	Philips Tapping Screw - M4x6	
111	0313 0050B	Philips Pan Head Screw - M3x5	

39. ELECTRICAL SECTION 1 (A095/A096/A097)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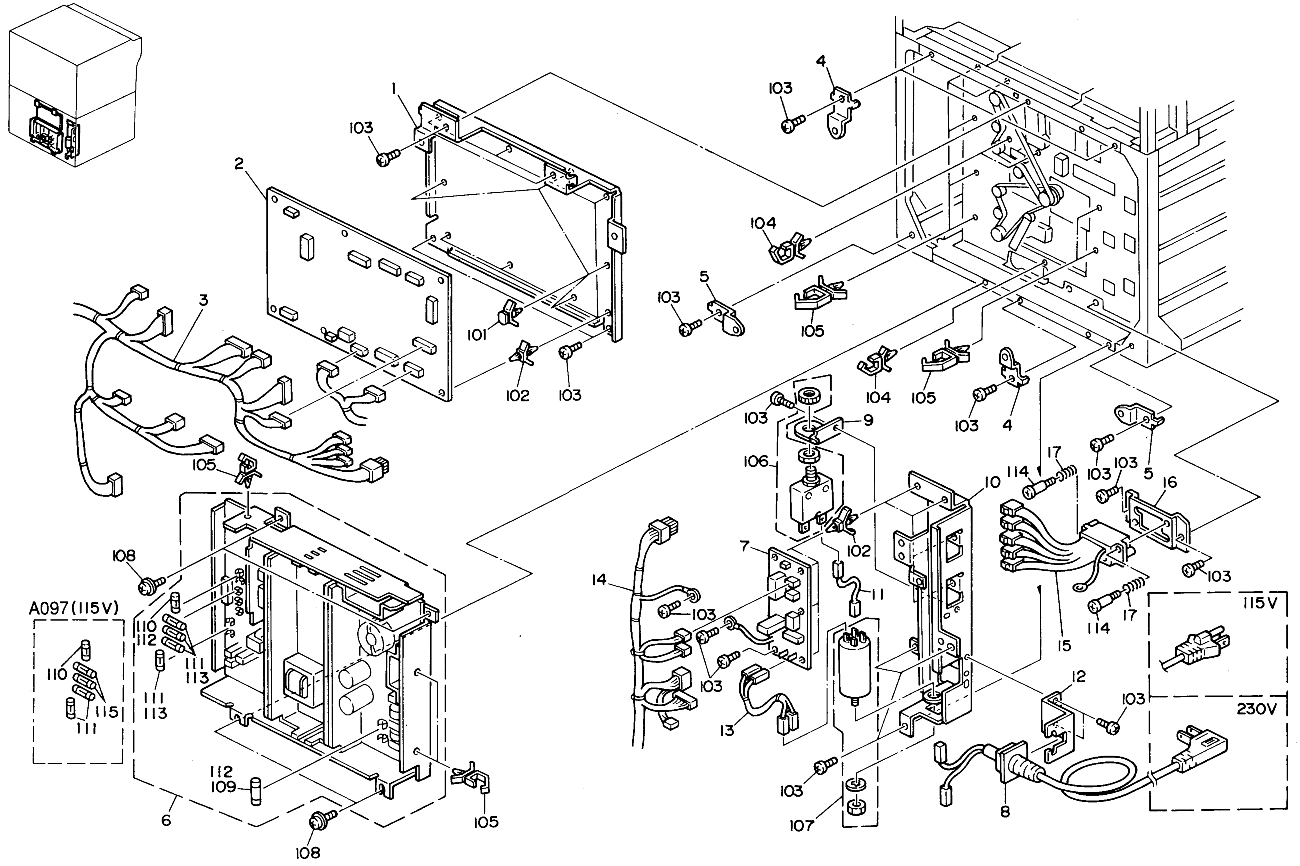
39. ELECTRICAL SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 5140	Optics Control Board (A095/A096)	1
1	A097 5140	Optics Control Board (A097)	1
2	A096 5509	Upper Support Plate	1
3	A096 1949	Optics Board Bracket	1
4	A096 1947	Optics Board Hinge	1
5	A096 2089	Vacuum Duct Bracket	1
6	A096 2088	Vacuum Duct Bracket	1
7	A096 2083	Middle Duct	1
8	AA15 1770	Middle Duct Seal	1
9	A096 5130	High Voltage Control Board	1
10	A095 5112	Main Control Board - 115V (A095)	1
	A095 5110	x/o MB12	
10	A095 5117	Main Control Board - 230V (A095)	1
	A095 5115	x/o MB12	
10	A096 5117	Main Control Board - 115/230V(A096 EU/A097)	1
	A096 5115	x/o MB12	
10	A096 5112	Main Control Board - 115V (A096)	1
	A096 5110	x/o MB12	
11	A096 5125	RAM Board	1
12	A096 5501	Main Board Bracket	1
13	A096 2110	Ozone Fan Motor	1
14	A096 2101	Rear Duct Bracket	1
15	AA15 1774	Rear Duct Seal	1
16	A096 2097	Rear Duct	1
17	A096 2109	Exhaust Duct Bracket	1
18	A096 2100	Exhaust Duct	1
19	A069 5352	Harness - Ground Wire - Scanner	1
20	A096 7580	AC Drive Board - 230V	1
20	A096 5175	AC Drive Board - 115V	1
21	A096 5516	AC Drive Board Bracket	1
22	A096 5121	IC - AM27C020-150DC	1
23	A096 5123	IC - AM27C512-120DC	1
24	A028 3146	Paper Feed Guide Spacer	1
25	AA15 1771	Seal - 5x10x138	1
26	A097 5540	Fan Motor Bracket (A097)	1

Index No.	Part No.	Description	Q'ty Per Assembly
27	AX64 0049	Fan Motor - DC24V 2.4W (A097)	1
28	A097 5541	Filter Bracket (A097)	1
29	AA01 2075	Filter (A097)	1
30	AX64 0045	Fan Motor - DC24V 1.68W (A097)	1
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	1105 0192	Locking Support	
104	0314 0080B	Philips Pan Head Screw - M4x8	
105	0951 4008B	Philips Screw With Washer - M4x8	
106	0414 0082B	Binding Self Tapping Screw - M4x8	
107	0434 0060W	Tapping Screw - M4x6	
108	1105 0292	Wire Saddle	
109	1105 0087	Clamp	
110	1105 0367	Spacer	
111	1105 0378	Clamp	
112	0314 0300B	Philips Pan Head Screw - M4x30	
113	0314 0140B	Philips Pan Head Screw - M4x14	

40. ELECTRICAL SECTION 2 (A095/A096/A097)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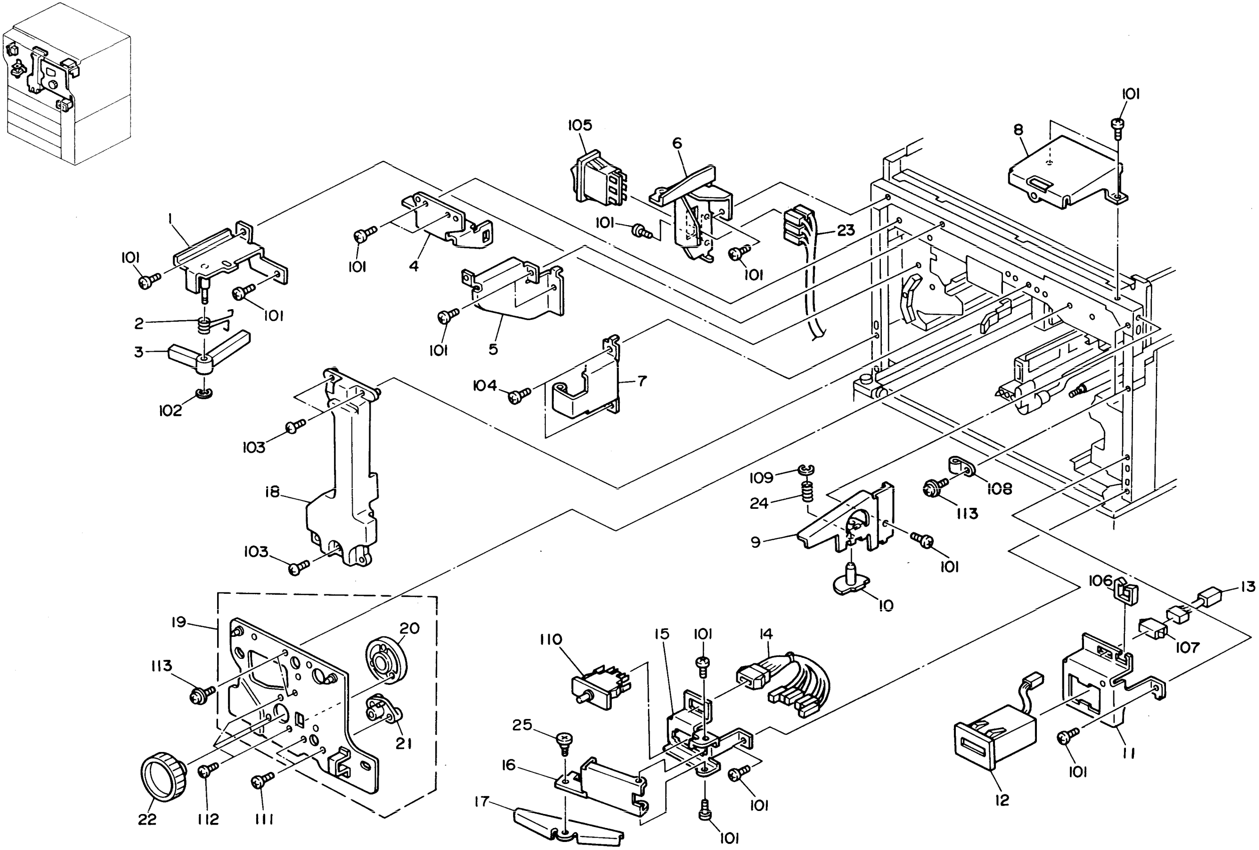
40. ELECTRICAL SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 5515	Board Bracket - Paper Feed	1
2	A095 5185	Paper Feed Board (A095)	1
2	A096 7450	Paper Feed Board (A096/A097)	1
3	A096 5410	Paper Feed Control Harness (A095)	1
3	A096 7630	LCT Harness (A096/A097)	1
4	A096 1365	Upper Cover Bracket	3
5	A096 1366	Lower Cover Bracket	2
6	AZ24 0021	DC Power Supply Unit - 220/230V (A095/A096)	1
6	AZ24 0024	DC Power Supply Unit - 220/230V (A097)	1
6	AZ24 0019	DC Power Supply Unit - 115V (A095/A096)	1
6	AZ24 0023	DC Power Supply Unit - 115V (A097)	1
7	A096 7500	Lightning Arrester Board - 220/230V	1
7	A096 5195	Lightning Arrester Board - 115V	1
8	A096 7601	Power Supply Cord - 220/230V	1
8	A096 7600	Power Supply Cord - 115V	1
9	A096 7662	Circuit Breaker Bracket - 220/230V	1
9	A096 5511	Circuit Breaker Bracket - 115V	1
10	A096 5510	Power Supply Bracket	1
11	A096 5462	Circuit Breaker Harness	1
12	A096 7661	Bracket - Power Supply Cord	1
13	A096 5461	Noise Filter Harness	1
14	A096 7605	Paper Bank AC Harness - 220/230V	1
14	A096 5460	Paper Bank AC Harness - 115V	1
15	A096 7631	LCT Relay Harness	1
16	A096 6815	Harness Bracket	1
17	AA06 3259	Connector Spring	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	1105 0367	Spacer	
102	1105 0192	Locking Support	
103	0434 0080B	Philips Tapping Screw - M4x8	
104	1105 0310	Wire Clamp	
105	1105 0291	Wire Saddle	
106	1107 0693	Circuit Breaker - 18A 250V	
107	1602 7068	Noise Filter - VC-210FA(220/230V)(A095/A096)	
107	1602 0946	Noise Filter - VC-210FA(220/230V)(A097)	
107	1602 0897	Noise Filter (115V)	
108	0964 4008B	Tapping Screw With Flat Washer-M4x8	
109	1107 0785	Fuse - 125V 10A (115V)	
110	1107 0391	Fuse - 5A 125V (115V)	
111	1107 0392	Fuse - 6.3A (115V)	
112	1107 0752	Fuse - 5A 250V (230V)	
113	1107 0753	Fuse - 6.3A 250V (230V)	
114	0803 0058	Stepped Screw	
115	1107 0794	Fuse - 6.3A 250V (115V) (A097)	

41. ELECTRICAL SECTION 3 (A095/A096/A097)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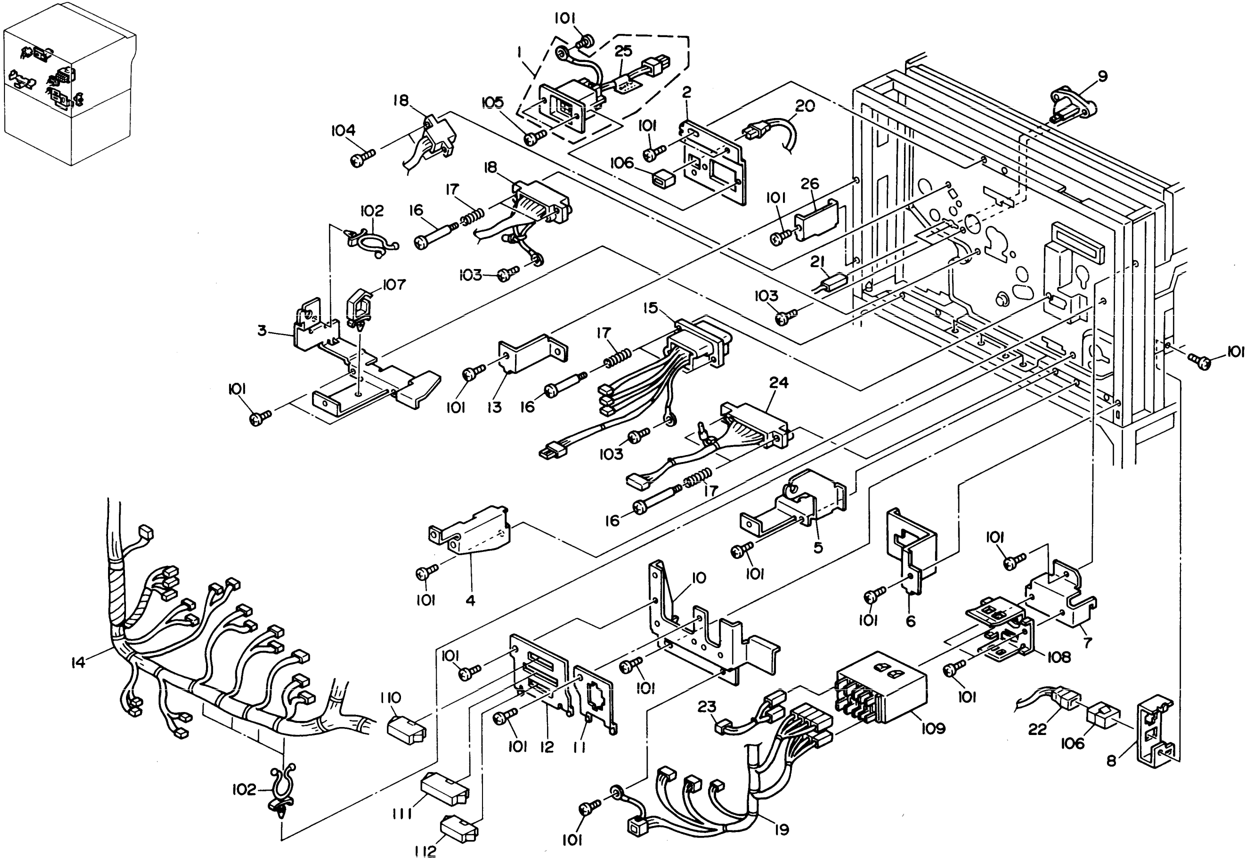
41. ELECTRICAL SECTION 3 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 4493	Release Arm Bracket	1
2	AA06 6224	Arm Release Spring	1
3	A096 4492	Lever Release Arm	1
4	A096 4497	Front Exit Unit Bracket	1
5	A096 1380	Left Support Bracket	1
6	A096 1330	Main Switch Bracket	1
7	A096 1336	Hinge Plate - Lower Left	1
8	A096 1289	Right Support Bracket	1
9	A096 1354	Hinge Plate - Upper Right	1
10	A096 1355	Hinge Shaft	1
11	A096 7660	Total Counter Bracket	1
12	AX31 0018	Total Counter	1
13	A096 7634	Total Counter Harness	1
14	A096 5406	Upper Switch Harness	1
15	A096 5530	Upper Switch Bracket	1
16	A096 5533	Upper Switch Arm	1
17	A096 5532	Upper Switch Lever	1
18	A096 3966	Belt Unit Support Plate	1
19	A096 2320	Drum Stay	1
20	A096 2325	Drum Stay Sleeve	1
21	A053 2135	Development Unit Holder	1
22	A096 2330	Drum Shaft Knob	1
23	A096 5450	AC Harness	1
24	AA06 3052	Turret Spring	1
25	5442 1659	Stepped Screw - M4	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0720 0030B	Retaining Ring - M3	
103	0802 5094	Tapping Truss Head Screw - M4x8	
104	0434 0080W	Tapping Screw - M4x8	
105	1204 1545	Main Switch	
106	1105 0328	Harness Clamp - ES-0505	
107	1102 6247	Connector - 4P	
108	1105 0009	Nylon Clip - 5N	
109	0720 0040B	Retaining Ring - M4	
110	1204 2277	Push Switch	
111	0413 0062W	Tapping Screw - M3x6	
112	0314 0060W	Philips Pan Head Screw - M4x6	
113	0314 0140W	Philips Pan Head Screw - M4x14	

42. ELECTRICAL SECTION 4 (A095/A096/A097)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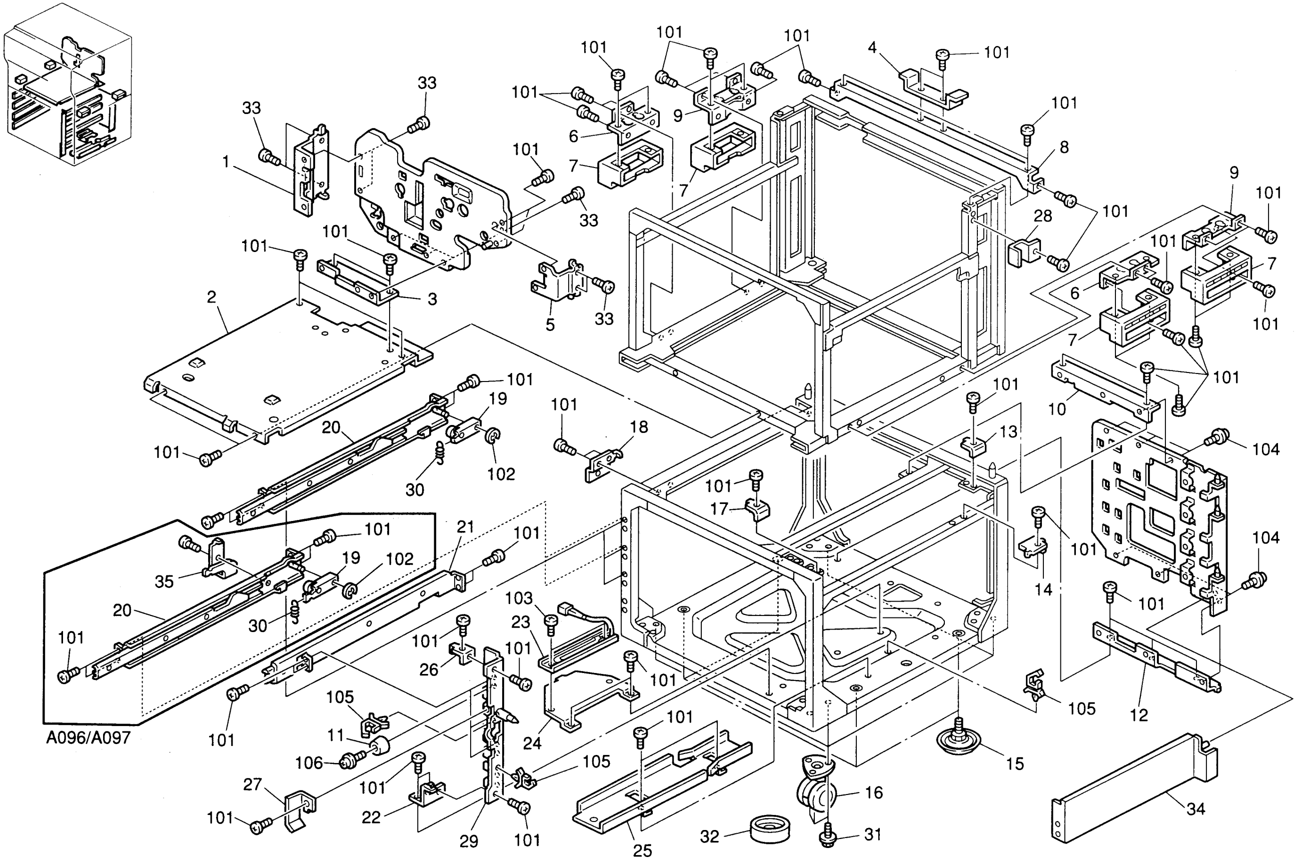
42. ELECTRICAL SECTION 4 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 7636	DF Harness - 115V	1
1	A096 5404	DF Harness - 230V	1
2	A096 5525	DF Connector Bracket	1
3	A096 5505	Right Hnge - Main Board	1
4	A096 5507	Left Angle - Main Board	1
5	A096 5506	Left Hinge - Main Board	1
6	A096 5521	AC Harness Bracket	1
7	A096 5519	Relay Bracket	1
8	A096 5524	Option Connector Bracket	1
9	AA08 4043	Rear Development Unit Holder	1
10	A096 5520	Connector Support Plate	1
11	A096 5522	Connector Bracket - DC PSU	1
12	A096 5523	Connector Bracket	1
13	A096 5508	Right Angle - Main Board	1
14	A095 5400	DC Main Harness (A095)	1
14	A096 5400	DC Main Harness (A096)	1
14	A097 5400	DC Main Harness (A097)	1
15	A096 7606	Fusing Harness - 230V	1
15	A096 5452	Fusing Harness - 115V	1
16	5446 5832	Connector Guide Pin	2
17	AA06 3068	Spring Connector	6
18	A096 5441	Drum Unit Harness	1
19	A096 5450	AC Harness	1
20	AW03 0029	Fiber Cable - 800	1
21	A096 5446	Development Bias Cable	1
22	AW03 0030	Fiber Cable - 400	1
23	A096 7635	Main Relay Harness - 115/230V	1
	A096 5451	o/o MB23	
24	A096 5431	Duplex Extension Harness	1
25	AA00 0149	Decal - Fuse - 115V	1
26	A096 5518	Harness Cover	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0080B	Philips Tapping Screw - M4x8	
102	1105 0316	Clamp	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	0313 0120W	Philips Pan Head Screw - M3x12	
105	0313 0060B	Philips Pan Head Screw - M3x6	
106	1102 6418	Fiber Cable - CA1002	
107	1105 0291	Wire Saddle	
108	1104 0224	Relay Bracket	
109	1208 0479	Power Relay - DC24V	
110	1102 6254	Connector - 11P	
111	1102 6256	Connector - 13P	
112	1102 6268	Connector - Red 11P	

43. FRAME SECTION 1 (A095/A096/A097)



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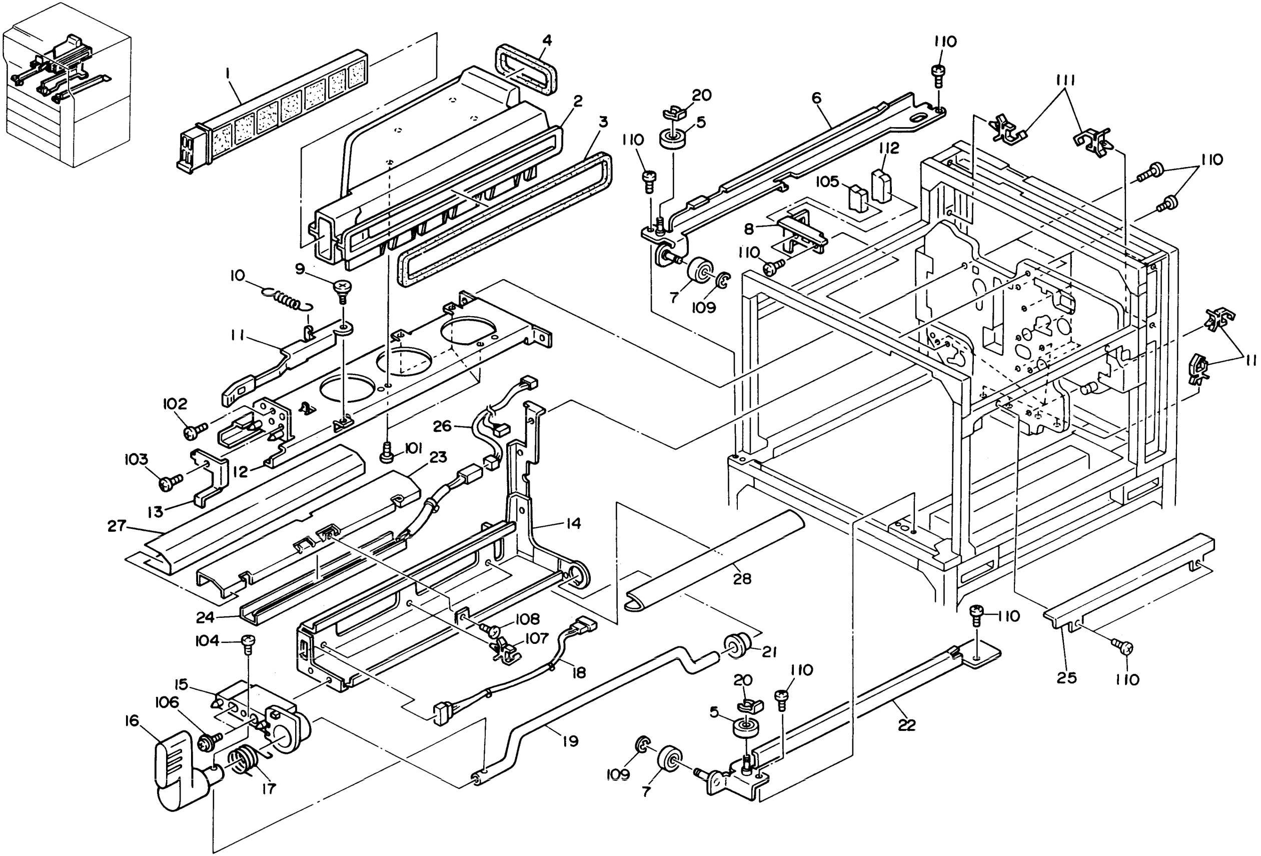
43. FRAME SECTION 1 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 1078	Left Fixing Plate	1
2	A096 1075	Base Cover	1
3	A096 1076	Lower Fixing Plate	1
4	A096 1293	Middle Support Bracket	1
5	A096 1077	Right Fixing Plate	1
6	A096 1095	Front Grip Bracket	2
7	A096 1094	Grip Base	4
8	A096 1072	Upper Middle Stay	1
9	A096 1096	Rear Grip Bracket	2
10	A096 6076	Upper Rear Fixing Plate	1
11	5446 2560	Cushion - Paper Tray	1
12	A096 6075	Lower Rear Fixing Plate	1
13	A096 6079	Right Rear Frame Joint	1
14	A096 6081	Collection Bottle Stopper	1
15	5424 1064	Screw Stand	4
16	5415 1053	Caster	4
17	A096 6078	Right Front Frame	1
18	A096 6080	Left Frame Joint	2
19	A096 6266	Tray Lock Arm	1 (3)
19	A096 6247	Tray Lock Arm - Tandem Tray (A096/A097) MB14	2
20	A096 6261	Left Rail	1 (3)
20	A096 6241	Left Rail - Tandem Tray (A096/A097) MB14	2
21	A096 6250	Right Rail	3
22	A096 6077	Upper Front Fixing Plate	1
23	AX40 0049	Anti-condensation Heater - 240V 18W	1
23	AX40 0021	Anti-condensation Heater - 115V 18W	1
24	A096 6100	Lower Heat Sink	1
25	A096 3710	Collection Tank Guide	1
26	A096 6818	Stopper Bracket	1
27	A096 6110	Harness Cover	1
28	A096 5535	Key Counter Stay	1
29	A096 6181	Front Side Plate - P/B	1
30	AA06 0592	Lock Spring - Tandem Tray	2
	AA06 0570	Tray Lock Spring - 20mm(Tandem) x/o MB14	

Index No.	Part No.	Description	Q'ty Per Assembly
30	AA06 0534	Tray Lock Spring - 19mm	1 (3)
31	5301 1662	Hexagon Bolt	12
32	AH01 3008	Leveling Foot Guide	4
	5446 1086	o/o MB5	
33	C201 5125	Shoulder Screw - M4	8
34	A096 6111	4th Tray Cover	1
35	A096 6246	Left Rail Bracket MB14	2
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0720 0040B	Retaining Ring - M4	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	0964 4008B	Tapping Screw With Flat Washer-M4x8	
105	1105 0291	Wire Saddle	
106	0960 4012B	Philips Flange Screw - M4 X 12	

44. FRAME SECTION 2 (A095/A096/A097)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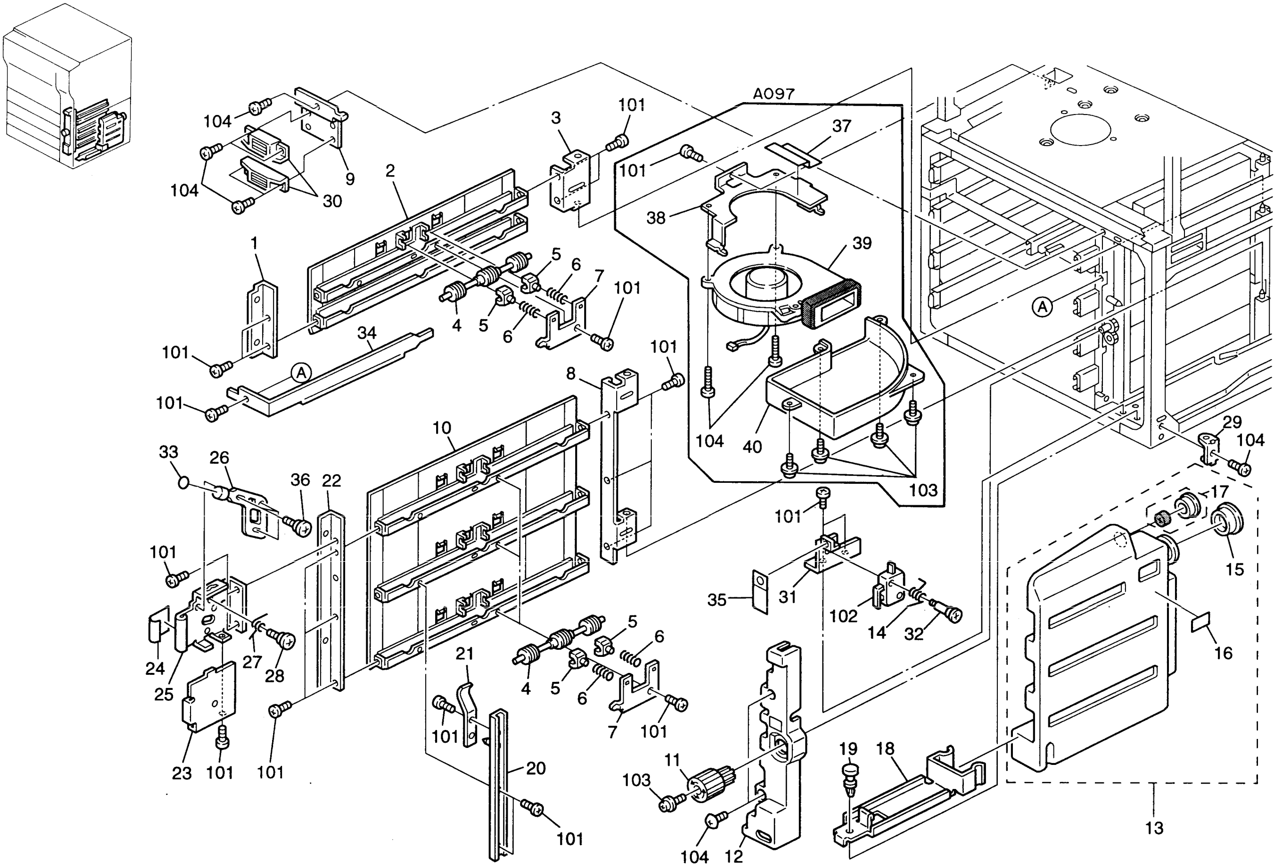
44. FRAME SECTION 2 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 2103	Ozone Filter	1
2	A096 2092	Main Duct	1
3	AA15 1772	Duct Seal	1
4	AA15 1773	Rear Duct Seal	1
5	A300 2134	Guide Roller - B	2
6	A096 4587	**Left Duplex Rail**	1
7	6754 2866	Roller - Positioning Guide	2
8	A096 4498	Rear Exit Unit Bracket	1
9	5446 3648	Stepped Screw - M4	1
10	AA06 0541	Bushing Lock Spring	1
11	A096 4261	Fusing Lock **Lever**	1
12	A096 4251	Fusing Unit Rail	1
13	A096 4271	Fusing Unit Stopper	1
14	A096 3951	Belt Unit Holder	1
15	A096 3955	Front Holder	1
16	A096 3961	Belt Unit Knob	1
17	AA06 6218	Unit Release Spring	1
18	A096 5444	Transfer Belt Harness	1
19	A096 3958	Release Arm	1
20	5447 2681	Snap Ring	2
21	AA08 0158	Bushing - 12x16x12.1	1
22	A096 4591	Right Duplex Rail	1
23	A096 3956	Heater Cover	1
24	AX40 0048	Anticondensation Heater - 15W 220/230V	1
24	AX40 0047	Anticondensation Heater- 15W 115V	1
25	A096 5590	Right Upper Harness Cover	1
26	A096 5453	Anticondensation Heater Harness 1	1
27	AA13 2017	Pressuer Roller	1
28	AA17 2013	Heater Cover	1

Index No.	Part No.	Description	**Q'ty Per** Assembly
101	0414 0082B	Binding Self Tapping Screw - M4x8	
102	0434 0060B	Philips Tapping Screw - M4x6	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	0314 0080B	Philips Pan Head **Screw -** M4x8	
105	1102 6249	Connector - 6P	
106	0951 4008B	Philips Screw With Washer - M4x8	
107	1105 0278	Harness Clamp	
108	0313 0050B	Philips Pan Head Screw - M3x5	
109	0720 0040B	Retaining Ring - M4	
110	0434 0080B	Philips Tapping Screw - M4x8	
111	1105 0310	Wire Clamp	
112	1102 6251	Connector - 8P	

45. FRAME SECTION 3 (A095/A096/A097)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45. FRAME SECTION 3 (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A096 6421	Upper Front Side Plate	1
2	A096 6423	Upper Transport Guide	1
3	A096 6422	Upper Rear Side Plate	1
4	AF02 0295	Vertical Driven Roller	3
5	AA08 0156	Bushing - M4	6
6	AA06 3487	Spring -10mm	6
7	A096 6402	Pressure Plate Driven Roller	3
8	A096 6404	Rear Side Plate	1
9	A096 1352	Magnet Catch Bracket	1
10	A096 6405	Lower Transport Guide	1
11	AG05 0067	Knob - Transport Roller	1
12	A096 6184	Bank Inner Cover	1
13	AA03 2020	Toner Collection Tank	1
14	A423 4433	Spring	1
15	A007 3751	Cap Large - Toner Collection Tank	1
16	AA00 0059	Caution Decal - English	1
17	AA15 2315	Tank Seal	1
18	A096 3711	Collection Tank Holder	1
19	A096 3712	Ratch	1
20	A096 6408	Guide Pressure Stay	1
21	A096 6412	Spring Plate	1
22	A096 6403	Front Side Plate	1
23	A096 6413	Release Lever Cover	1
24	A029 2984	Decal - Grip	1
25	A096 6411	Release Lever Bracket	1
26	A029 2858	Release Lever	1
27	5446 2846	Release Spring - Vertical Transport	1
28	5403 6246	Stepped Screw - Cleaning	1
29	A096 1358	Hinge Plate - Lower Right	1
30	AG07 0004	Magnetic Catch	2
31	A096 5529	Micro Switch Bracket	1
32	A423 4432	Shoulder Screw - M2.5	1
33	AA00 1326	Decal - A1	1
34	A096 6190	Middle Guide Plate	1
35	A096 5528	Micro Switch Sheet	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	5201 1796	Stepped Screw - M4	1
37	A097 5552	Fan Plate (A097)	1
38	A097 5550	Fan Motor Bracket (A097)	1
39	A097 5553	Cooling Fan Motor - DC24V 9.6W (A097)	1
40	A097 5551	Fan Motor Duct (A097)	1
101	0434 0060B	Philips Tapping Screw - M4x6	
102	1204 2355	Microswitch - AM51632A531	
103	0960 4006B	Philips Flange Screw - M4x6	
104	0434 0080B	Philips Tapping Screw - M4x8	

46. MAIN CONTROL BOARD (A095/A096/A097)

CAPACITOR

SYMBOL NO.	INDEX NO.
C101	149
C102	149
C103	143
C104	151
C105	151
C106	151
C107	151
C108	151
C109	142
C110	143

SYMBOL NO.	INDEX NO.
C111	151
C112	143
C114	143
C115	146
C116	146
C117	144
C118	144
C119	145
C120	145

SYMBOL NO.	INDEX NO.
C121	143
C123	148
C124	148
C125	148
C126	149
C127	151
C128	148
C129	151
C130	151

SYMBOL NO.	INDEX NO.
C131	148
C132	148
C133	151
C134	151
C135	151
C136	146
C137	146
C138	151
C139	148
C140	151

SYMBOL NO.	INDEX NO.
C141	150
C142	150
C143	148
C144	151
C145	148
C146	151
C147	151
C148	149
C149	149
C150	148

SYMBOL NO.	INDEX NO.
C151	148
C152	149
C153	149
C154	148
C155	151
C157	148
C158	148
C159	148
C160	148

SYMBOL NO.	INDEX NO.
C161	151
C162	151
C163	151
C164	151
C165	151
C167	151
C168	151
C169	153
C170	153

SYMBOL NO.	INDEX NO.
C171	149
C172	151
C173	151
C174	151
C175	151
C176	151
C177	151
C178	147
C179	147
C180	148

SYMBOL NO.	INDEX NO.
C181	151
C182	148
C183	151
C184	151
C185	148
C186	151
C187	151
C188	151
C189	151
C190	151

SYMBOL NO.	INDEX NO.
C191	151
C192	151
C193	151
C194	151
C195	151
C196	151
C197	151
C198	151
C199	151
C200	

SYMBOL NO.	INDEX NO.
C201	148
C203	148
C204	151
C205	148
C206	151
C207	151
C208	151
C209	151
C210	151

SYMBOL NO.	INDEX NO.
C211	151
C212	151
C213	151
C214	151
C215	151
C216	151
C217	151
C218	148
C219	149
C220	151

SYMBOL NO.	INDEX NO.
C221	149
C222	151
C223	151
C224	151
C225	151
C226	151
C227	151
C228	151
C229	151
C230	151

SYMBOL NO.	INDEX NO.
C231	151
C232	151
C233	148
C234	151
C235	151
C236	151
C237	151
C238	151
C239	151
C240	151

46. MAIN CONTROL BOARD (A095/A096/A097)

SYMBOL NO.	INDEX NO.
C241	148
C242	148
C243	149
C244	151
C245	151
C246	148
C247	148
C248	151
C249	151
C250	151

SYMBOL NO.	INDEX NO.
C251	151
C252	143
C253	151
C254	151
C255	151
C256	151
C257	151
C258	151
C259	151
C260	151

CONNECTOR

SYMBOL NO.	INDEX NO.
CN200	4
CN201	4

DPS

SYMBOL NO.	INDEX NO.
DPS101	101

DAY

SYMBOL NO.	INDEX NO.
DAY101	107
DAY102	107
DAY103	107
DAY104	107
DAY105	107
DAY106	107

DIODE

SYMBOL NO.	INDEX NO.
D101	104
D102	109
D103	109
D104	109
D105	109
D106	109
D107	109
D108	109
D109	109
D110	109

SYMBOL NO.	INDEX NO.
D111	106
D112	109
D113	109
D115	106
D116	106
D117	106
D118	106
D119	106
D120	106

SYMBOL NO.	INDEX NO.
D121	106
D122	106
D123	106
D124	106
D125	106
D126	104
D127	104

FIB

SYMBOL NO.	INDEX NO.
FIB101	152
FIB102	152
FIB103	152
FIB104	152
FIB105	152
FIB106	152
FIB107	152
FIB108	152
FIB109	152

IC

SYMBOL NO.	INDEX NO.
IC101	112
IC102	130
IC103	121
IC104	134
IC105	124
IC106	128
IC107	128
IC108	117
IC109	112
IC110	130

SYMBOL NO.	INDEX NO.
IC111	114
IC112	128
IC113	134
IC114	123
IC115	115
IC116	127
IC117	134
IC118	124
IC120	1

SYMBOL NO.	INDEX NO.
IC122	132
IC123	123
IC124	123
IC125	117
IC126	116
IC127	124
IC128	120
IC129	119
IC130	3

SYMBOL NO.	INDEX NO.
IC131	113
IC132	105
IC134	131
IC135	122
IC136	135
IC137	135
IC138	123
IC139	133
IC140	121

SYMBOL NO.	INDEX NO.
IC141	137
IC142	123
IC143	129
IC144	128
IC145	126
IC146	127
IC147	116
IC148	125
IC149	136
IC150	121

SYMBOL NO.	INDEX NO.
IC151	124
IC152	123
IC153	121
IC154	118
IC155	112
IC156	127

LED

SYMBOL NO.	INDEX NO.
LED101	111

OSC

SYMBOL NO.	INDEX NO.
OSC101	138
OSC102	139
OSC103	140

TRANSISTOR

SYMBOL NO.	INDEX NO.
Q101	102
Q102	102
Q103	102
Q104	102
Q105	102
Q106	102
Q107	102
Q108	102
Q109	103
Q110	103

RAY

SYMBOL NO.	INDEX NO.
RAY101	141
RAY102	141
RAY103	141

RESISTOR

SYMBOL NO.	INDEX NO.
R101	170
R102	165
R103	160
R104	155
R105	155
R106	155
R107	155
R108	155
R109	155
R110	155

SYMBOL NO.	INDEX NO.
R111	167
R112	167
R113	167
R114	167
R115	167
R116	167
R117	167
R118	167
R119	170
R120	167

SYMBOL NO.	INDEX NO.
R121	167
R122	167
R123	167
R124	157
R125	157
R126	157
R127	157
R128	157
R129	157
R130	157

SYMBOL NO.	INDEX NO.
R131	157
R132	157
R133	157
R134	157
R135	157
R136	170
R137	170
R138	157
R139	156
R140	172

SYMBOL NO.	INDEX NO.
R141	156
R142	156
R143	156
R144	156
R145	156
R146	156
R147	157
R148	156
R149	156
R150	156

SYMBOL NO.	INDEX NO.
R151	156
R152	156
R153	156
R154	156
R155	156
R156	165
R157	165
R158	165
R159	165
R160	157

SYMBOL NO.	INDEX NO.
R161	157
R162	170
R163	171
R164	156
R165	156
R166	161
R167	156
R168	167
R169	157
R170	156

SYMBOL NO.	INDEX NO.
R171	156
R172	170
R173	172
R174	172
R175	158
R176	157
R177	162
R178	156
R179	166
R180	156

SYMBOL NO.	INDEX NO.
R181	157
R182	156
R183	157
R184	160
R185	157
R186	157
R187	157
R188	157
R189	157

SYMBOL NO.	INDEX NO.
R191	166
R192	160
R193	160
R194	158
R195	157
R196	167
R197	154
R198	170
R199	156
R200	156

SYMBOL NO.	INDEX NO.
R201	162
R202	158
R203	164
R204	157
R205	157
R206	164
R207	170
R208	170
R209	170
R210	170

46. MAIN CONTROL BOARD (A095/A096/A097)

SYMBOL NO.	INDEX NO.
R211	170
R212	168
R214	170
R215	170
R216	170
R217	157
R218	157
R219	157
R220	157

SYMBOL NO.	INDEX NO.
R221	157
R224	170
R225	170
R226	170
R227	170
R228	156
R229	170
R230	167

SYMBOL NO.	INDEX NO.
R231	168
R232	159
R233	157
R234	164
R235	156
R236	166
R237	160
R238	156
R239	156
R240	156

SYMBOL NO.	INDEX NO.
R241	156
R242	156
R243	156
R244	156
R245	156
R246	170
R247	170
R248	170
R249	163
R250	169

SYMBOL NO.	INDEX NO.
R251	157
R252	170
R253	170
R254	170
R255	170
R256	170
R257	170
R258	170
R259	170
R260	170

SYMBOL NO.	INDEX NO.
R261	157
R262	157
R263	157
R264	157
R265	170
R266	170
R267	170
R268	170
R269	170
R270	170

SYMBOL NO.	INDEX NO.
R271	170
R272	157
R273	157
R274	170
R275	157
R276	157
R277	167
R278	167
R279	167
R280	167

SYMBOL NO.	INDEX NO.
R281	167
R282	157
R283	157
R284	157
R285	157
R286	156
R287	167
R288	170
R289	170

SYMBOL NO.	INDEX NO.
R293	170
R294	170
R295	170
R296	157
R297	157
R298	157
R299	157
R300	155

SYMBOL NO.	INDEX NO.
R301	166
R302	160
R303	167
R304	170
R305	167
R306	170
R307	166
R308	157
R309	157
R310	156

SYMBOL NO.	INDEX NO.
R311	170
R312	170
R313	170
R314	167
R315	170
R316	157
R317	170
R318	157
R319	156
R320	157

SYMBOL NO.	INDEX NO.
R321	156
R322	156
R323	157
R324	172
R387	172
R389	172
R390	172

SYMBOL NO.	INDEX NO.
R391	172
R392	172
R393	172
R394	172
R395	172

ZD

SYMBOL NO.	INDEX NO.
ZD101	108
ZD102	110

46. MAIN CONTROL BOARD (A095/A096/A097)

Index No.	Part No.	Description	Q'Sty Per Assembly
*	A095 5112	Main Control Board - 115V (A095)	1
	A095 5110	x/o MB12	
*	A095 5117	Main Control Board - 230V (A095)	1
	A095 5115	x/o MB12	
*	A096 5117	Main Control Board - 115/230V(A096EU/A097)	1
	A096 5115	x/o MB12	
*	A096 5112	Main Control Board - 115V (A096)	1
	A096 5110	x/o MB12	
1	A096 5151	IC - AM27C040-150DC	1
	A096 5121	IC - AM27C020-150DC x/o MB12	
2	A096 5153	IC - AM27C010-120DC	1
	A096 5123	IC - AM27C512-120DC x/o MB12	
3	A096 5129	IC - M37409M2-155FP	1
4	A096 5125	RAM Board	1

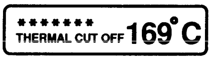
Index No.	Part No.	Description	Q'ty Per Assembly
101	1204 1542	Dip Switch	
102	1400 0528	Transistor - DTB113EK	
103	1401 0298	Transistor - 2SC2712Y	
104	1401 0835	Diode - 1SS190	
105	1401 0986	Transistor - µPA1552H	
106	1402 0476	Diode - 1SS184	
107	1402 0492	Diode - DICA20	
108	1402 0687	Diode - RD12P	
109	1402 1122	Diode - MA159A	
110	1402 1152	Diode - RD7.5P	
111	1403 0558	LED - SEI2110RTP3	
112	1407 1311	IC - LS32	
113	1407 1596	IC - SN74LS14NS	
114	1407 1925	IC - SN15189ANS	
115	1407 1926	IC - SN75188NS	
116	1407 2052	IC - SN74LS7ANS	
117	1407 2081	IC - SN74LS08NS	
118	1407 2135	TTLIC - 74F74SJ	
119	1407 2137	IC - 74F138SJ : TTL	
120	1407 2138	TTLIC - 74F139SJ	
121	1407 2187	IC - SN74LS07NS	
122	1407 2218	IC - SN74LS06NS	
123	1407 2231	IC - TD62308AF	
124	1407 2344	IC - TD62382F	
125	1407 2463	IC - SN74ALS08NS	
126	1407 2464	IC - SN74ALS7ANS	
127	1407 2588	IC - SN74ALS04BNS	
128	1407 2817	IC - SN74ALS32NS	
129	1407 3224	IC - LH5164LN-10	
130	1407 3852	IC - MB89371AH	
131	1407 4137	IC - MM1035XF	
132	1407 4143	IC - MC68331FC	
133	1407 4144	IC - H81532-HD6435328A00M	
134	1407 4146	LSI - MB89255AHPFS	
135	1407 4147	IC - M66320FP	

Index No.	Part No.	Description	Q'ty Per Assembly
136	1408 0595	IC - NJM2904M	
137	1408 0826	IC - TA8428K	
138	1503 0194	Crystal Oscillator -32.768 KHz	
139	1503 0261	Oscillator - 9.8304MHz	
140	1503 0307	Oscillator - 20 MHz	
141	1601 7374	Resistor Array - 4.7K OHM	
142	1604 1377	Capacitor - 0.47µF 50V	
143	1604 1382	Capacitor - 10µF 50V	
144	1604 1385	Capacitor - 47µF 50V	
145	1604 1386	Capacitor - 100µF ±20% 50V	
146	1605 0113	Capacitor - 4700PF 50V	
147	1605 0233	Capacitor - 15PF 50V	
148	1605 0636	Capacitor - 0.1µF	
149	1606 1135	Capacitor - 470PF 50V	
150	1606 1450	Capacitor - 10PF 50V	
151	1606 1452	Capacitor - 0.01µF 50V	
152	1607 0551	Inductor - BIM32A07PB	
153	1610 0286	Capacitor -100PF 50V ±10%	
154	1630 1101	Resistor -100 OHM 1/4W ±5%	
155	1630 1151	Resistor -150 OHM ±5% 1/4W	
156	1630 2102	Resistor -1 K OHM 1/8W ±5%	
157	1630 2103	Resistor - 10K OHM 1/8W	
158	1630 2104	Resistor - 100K OHM 1/8W ±5%	
159	1630 2105	Resistor -1M OHM 1/8W	
160	1630 2121	Resistor -120 OHM ±5% 1/8W	
161	1630 2123	Resistor - 12K OHM 1/8W ±5%	
162	1630 2154	Resistor - 150K OHM ±50% 1/8W	
163	1630 2206	Resistor - 20M OHM 1/8W ±5%	
164	1630 2220	Resistor - 22 OHM 1/8W ±5%	
165	1630 2221	Resistor - 220 OHM	
166	1630 2222	Resistor - 2.2K OHM 1/8W	
167	1630 2223	Resistor - 22K OHM 1/8W ±5%	
168	1630 2330	Resistor - 33 OHM 1/8W ±5%	
169	1630 2331	Resistor - 330 OHM 1/8W ±5%	
170	1630 2472	Resistor - 4.7K OHM 1/8W ±5%	

Index No.	Part No.	Description	Q'ty Per Assembly
171	1630 2473	Resistor - 47K OHM 1/8W ±5%	
172	1630 2910	Resistor - 91 OHM 1/8W ±5%	

47. DECAL AND DOCUMENT (A095/A096/A097)

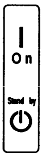
1


****
THERMAL CUT OFF 169°C

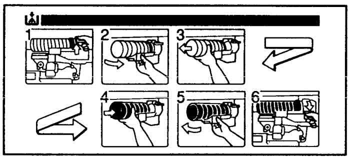
2

3

4


I
On
Stand by

6



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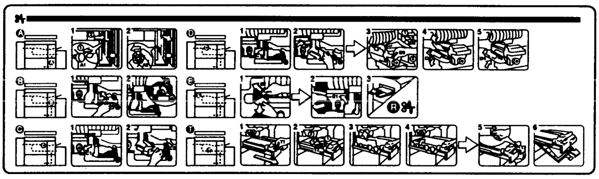
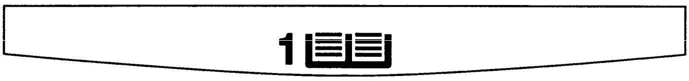


7

WARNING

- Do not incinerate waste toner.
- Toner dust may cause flashback when exposed to open flame.

9



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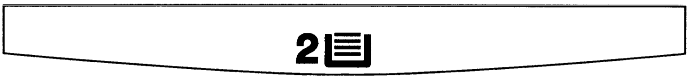

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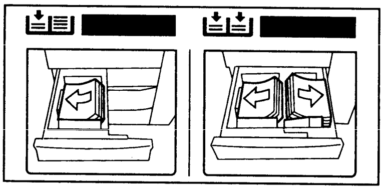

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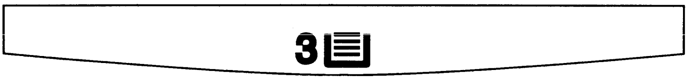

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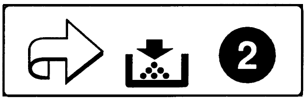

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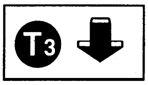

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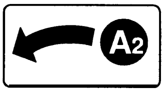

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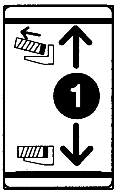

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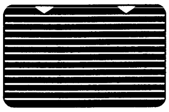

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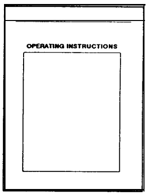
OPERATING INSTRUCTIONS

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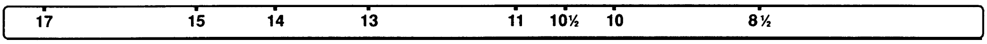
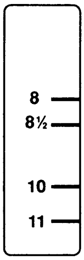

17
15
14
13
11
10½
10
8½

20



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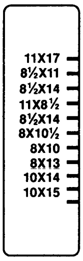
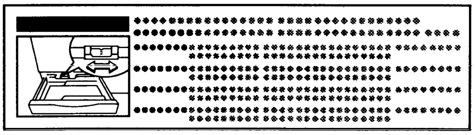

11X17
8½X11
8½X14
11X8½
8½X14
8X10½
8X10
8X13
10X14
10X15

23

24



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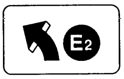

47. DECAL AND DOCUMENT (A095/A096/A097)

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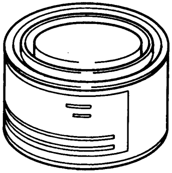
1	5216 4145	Thermofuse Decal	1
2	5446 2638	Decal - Paper Lower Limit	1
3	A029 2984	**Decal - Grip**	1
4	A096 1300	Decal - Main Switch	1
5	A096 1338	**Decal -** Misfeed Removal	1
6	A096 1339	Decal - Add Toner	1
7	AA00 0059	Caution Decal - English	1
8	AA00 0136	Decal - Left Tandem Tray	1
9	AA00 0137	**Decal -** Tandem Tray 1	1
10	AA00 0138	Decal - No.2	1
11	AA00 0139	**Decal -** No.3	1
12	AA00 0144	Decal - Right Tandem Tray	1
13	AA00 1213	Decal - B2	1
14	AA00 1322	Decal - Bottle Set	1
15	AA00 1323	**Decal -** Bottle Shutter	1
16	AA00 1324	**Decal -** Duplex Lever	1
17	AA00 1326	**Decal -** A1	1
18	AA00 1327	Decal - Misfed Removal A2	1
19	AA00 2010	**Decal -** Paper Level	3
20	AA00 2176	Decal - Side Fence - A4	1
20	AA00 2177	Decal - Side Fence - LT	1
21	AA00 2178	Decal - End Fence - A4	1
21	AA00 2179	Decal - End Fence - LT	1
22	AA00 2184	Decal - A4	1
22	AA00 2181	Decal - LT	1
23	AA00 2175	Decal - Paper Size - A4	1
23	AA00 2192	Decal - Paper Size - LT	1
24	AA00 0134	Decal - Tray Universal	1
25	A096 8607	Operating Instructions - English LT	1
26	AA00 1331	Decal - E2	1

Index No.	Part No.	Description	Q'ty Per Assembly

48. SPECIAL TOOL (A095/A096/A097)

1.7.



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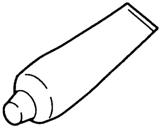

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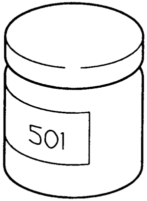

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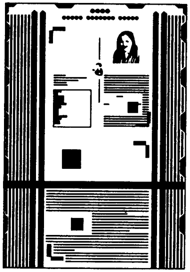

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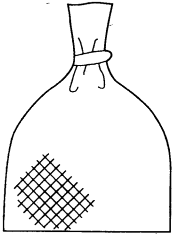

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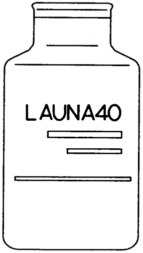

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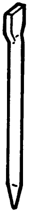

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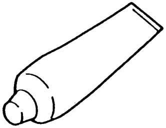

48. SPECIAL TOOL (A095/A096/A097)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A028 9300	Grease KOK Barrierta - JFE5 5/2	1
2	A008 9502	Silicone Grease - G40M	1
3	5203 9501	Grease 501	1
4	5420 9516	Test Chart - OS - A3 (10pts/set)	1
5	5442 9101	Setting Powder	1
6	5442 9103	Launa Oil	1
7	5447 9078	Heat Resisting Grease MT-78	1
8	A096 1337	Hinge Shaft - Lower Left	1
9	G004 9668	Grease: KS660:SHIN-ETSU	1

Index No.	Part No.	Description	Q'ty Per Assembly

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1105 0291	Wire Saddle	23-113
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1105 0291	Wire Saddle	37-114
1105 0291	Wire Saddle	51-106
1105 0291	Wire Saddle	87-109
1105 0291	Wire Saddle	91-105
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1105 0292	Wire Saddle	25-107
1105 0292	Wire Saddle	89-108
1105 0310	Wire Clamp	91-104
1105 0310	Wire Clamp	99-111
1105 0316	Clamp	95-102
1105 0328	Harness Clamp - ES-0505	93-106
1105 0367	Spacer	89-110
1105 0367	Spacer	91-101
1105 0378	Clamp	89-111
1106 0459	Bushing-20.2mm .	21-107
1107 0391	Fuse - 5A 125V (115V)	91-110
1107 0392	Fuse - 6.3A (115V)	91-111
1107 0693	Circuit Bresker - 18A 250V	91-106
1107 0752	Fuse - 5A 250V (230V)	91-112
1107 0753	Fuse - 6.3A 250V (230V)	91-113
1107 0785	Fuse - 125V 10A (115V)	91-109

Part No.	Description	Page and Index No.
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1204 1542	Dip Switch	105-101
1204 1545	Main Switch	93-105
1204 2277	Push Switch	93-110
1204 2355	Microswitch-AM51632A531	101-102
1204 2363	Microswitch-AH735454N	83-105
1208 0479	PowerRelay-DC24V	95-109
1400 0528	Transistor-DTB113EK	105-102
1401 0298	Transistor-2SC2712Y	105-103
1401 0835	Diode-1SS190	105-104
1401 0986	Transistor-µPA1552H	105-105
1402 0476	Diode-1SS184	105-106
1402 0492	Diode-DICA20	105-107
1402 0687	Diode-RD12P	105-108
1402 1122	Diode-MA159A	105-109
1402 1152	Diode-RD7.5P	105-110
1403 0558	LED-SEI2110RTP3	105-111
1407 1311	IC - LS32	105-112
1407 1596	IC-SN74LS14NS	105-113
1407 1925	IC-SN15189ANS	105-114
1407 1926	IC-SN75188NS	105-115
1407 2052	IC-SN74LS7ANS	105-116
1407 2081	IC-SN74LS08NS	105-117
1407 2135	TTLIC-74F74SJ	105-118
1407 2137	IC-74F138SJ:TTL	105-119
1407 2138	TTLIC-74F139SJ	105-120
1407 2187	IC-SN74LS07NS	105-121
1407 2218	IC-SN74LS06NS	105-122
1407 2231	IC-TD62308AF	105-123
1407 2344	IC-TD62382F	105-124
1407 2463	IC-SN74ALS08NS	105-125
1407 2464	IC-SN74ALS7ANS	105-126
1407 2588	IC-SN74ALS04BNS	105-127
1407 2817	IC-SN74ALS32NS	105-128
1407 3224	IC-LH5164LN-10	105-129

Part No.	Description	Page and Index No.
1407 3852	IC-MB89371AH	105-130
1407 4137	IC-MM1035XF	105-131
1407 4143	IC-MC68331FC	105-132
1407 4144	IC-H81532-HD6435328A00M	105-133
1407 4146	LSI-MB89255AHPFS	105-134
1407 4147	IC-M66320FP	105-135
1408 0595	IC-NJM2904M	105-136
1408 0826	IC-TA8428K	105-137
1503 0194	Crystal Oscillator-32.768 KHz	105-138
1503 0261	Oscillator - 9.8304MHz	105-139
1503 0307	Oscillator - 20MHz	105-140
1601 7374	Resistor Array - 4.7K OHM	105-141
1602 0897	Noise Filter (115V)	91-107
1602 0946	Noise Filter - VC-210FA (220/230V) (A097)	91-107
1602 7068	Noise Filter - VC-210FA (220/230V) (A095/A096)	91-107
1604 1377	Capacitor - 0.47µF 50V	105-142
1604 1382	Capacitor - 10µF 50V	105-143
1604 1385	Capacitor - 47µF 50V	105-144
1604 1386	Capacitor - 100µF ±20% 50V	105-145
1605 0113	Capacitor - 4700PF 50V	105-146
1605 0233	Capacitor - 15PF 50V	105-147
1605 0636	Capacitor - 0.1µF	105-148
1606 1135	Capacitor - 470PF 50V	105-149
1606 1450	Capacitor - 10PF 50V	105-150
1606 1452	Capacitor - 0.01µF 50V	105-151
1607 0551	Inductor - BIM32A07PB	105-152
1610 0286	Capacitor - 100PF 50V ±10%	105-153
1630 1101	Resistor -100 OHM 1/4W ±5%	105-154
1630 1151	Resistor - 150 OHM ±5% 1/4W	105-155
1630 2102	Resistor -1K OHM 1/8W ±5%	105-156
1630 2103	Resistor - 10K OHM 1/8W	105-157
1630 2104	Resistor - 100K OHM 1/8W ±5%	105-158
1630 2105	Resistor -1M OHM 1/8W	105-159
1630 2121	Resistor -120 OHM ±5% 1/8W	105-160
1630 2123	Resistor - 12K OHM 1/8W ±5%	105-161

Part No.	Description	Page and Index No.
1630 2154	Resistor - 150K OHM ±50% 1/8W	105-162
1630 2206	Resistor - 20M OHM 1/8W ±5%	105-163
1630 2220	Resistor - 22 OHM 1/8W ±5%	105-164
1630 2221	Resistor - 220 OHM	105-165
1630 2222	Resistor - 2.2K OHM 1/8W	105-166
1630 2223	Resistor - 22K OHM 1/8W ±5%	105-167
1630 2330	Resistor - 33 OHM 1/8W ±5%	105-168
1630 2331	Resistor - 330 OHM 1/8W ±5%	105-169
1630 2472	Resistor - 4.7K OHM 1/8W ±5%	105-170
1630 2473	Resistor - 47K OHM 1/8W ±5%	105-171
1630 2910	Resistor - 91 OHM 1/8W ±5%	105-172

Part No.	Description	Page and Index No.

SECTION 1

OVERALL MACHINE INFORMATION

1. SPECIFICATIONS

Configuration:	Console	
Copy Process:	Dry electrostatic transfer system	
Toner Supply Control:	Fuzzy Control	
Photoconductor:	OPC drum	
Originals:	Sheet/Book	
Original Size:	Maximum	A3/11" x 17"
Original Alignment:	Left rear corner	
Copy Paper Size:	Maximum	A3/11" x 17"
	Minimum	A5/5 1/2" x 8 1/2" (Tray) B5/8 1/2" x 11" (1.5K LCT) A6/5 1/2" x 8 1/2" (By-pass)
Duplex Copying:	Maximum	A3/11" x 17"
	Minimum	A5/5 1/2" x 8 1/2" (sideways)
Copy Paper Weight:	Paper tray:	52 ~ 128 g/m^2, 14 ~ 34 lb
	Bypass feed table:	52 ~ 157 g/m^2, 14 ~ 42 lb
	Duplex copying:	64 ~ 104 g/m^2, 17 ~ 24 lb
Reproduction Ratios:	4 Enlargement and 6 Reduction	

	A4/A3 Version	LT/LDG Version
Enlargement	200% 141% 122% 115%	200% 155% 129% 121%
Full Size	100%	100%
Reduction	93% 82% 75% 71% 65% 50%	93% 85% 77% 74% 65% 50%

Power Source: 115V, 60Hz, more than 20A (for N.A)
220 ~ 240V, 50Hz/60Hz, more than 10A (for EU and AA)

Power Consumption: A095 and A096 copiers

	Copier only	Full system*
Warm-up	0.9 kVA	0.9 kVA
Stand-by	0.25 kVA	0.25 kVA
Copying	1.2 kVA	1.3 kVA
Maximum	1.45 kVA	1.5 kVA

*Full System:

- Mainframe with dual job feeder, compact sorter stapler and 3,500-sheet large capacity tray
- Mainframe with dual job feeder, floor type sorter stapler and 3,500-sheet large capacity tray
- Mainframe with recirculating document handler, finisher and 3,500-sheet large capacity tray

Noise Emission:

sound pressure level: The measurements are made according to ISO7779

	Copier only	Full system*
Copying	55 dB (A)	61 dB (A)

Full System:

- Mainframe with dual job feeder, compact sorter stapler and 3,500-sheet large capacity tray
- Mainframe with dual job feeder, floor type sorter stapler and 3,500-sheet large capacity tray
- Mainframe with recirculating document handler, finisher and 3,500-sheet large capacity tray

Dimensions: 690 x 690 x 980 (W x D x H Mainframe only)
1280 x 690 x 1020 (W x D x H Mainframe with copy tray, platen cover)

Weight: Copier only: (Without the optional platen cover = Approximately 2 kg)
A095 copier: Approximately 151 kg
A096 copier: Approximately 163 kg

Zoom: From 50% to 200% in 1% steps

Copying Speed:

	A4/LT (sideways)	A3/DLT	B4/LG
A095 copier	45	23	27
A096 copier	55	28	35

Warm-up Time: Less than 5 minutes (20°C)

First Copy Time: 3.1 seconds (A4/8½" x 11" sideways from the 1st feed station)

Copy Number Input: Number keys, 1 to 999 (count up or count down)

Manual Image Density Selection: 7 steps

Automatic Reset: 1 minute standard setting; can also be set from 1 second to 999 seconds or no auto reset.

Copy Paper Capacity:

- By-pass feed table: approximately 50 sheets
- Paper tray: approximately 550 sheets
- Tandem tray: approximately 500 sheets
- Large capacity tray: approximately 1500 sheets

Toner Replenishment:	1,100 g/cartridge
Optional Equipment:	• Platen cover • Dual job feeder • Recirculating document handler • 20 bin sorter stapler (Floor type) • 20 bin compact sorter stapler • Finisher • 3500-sheet Large capacity tray • Receiving Tray

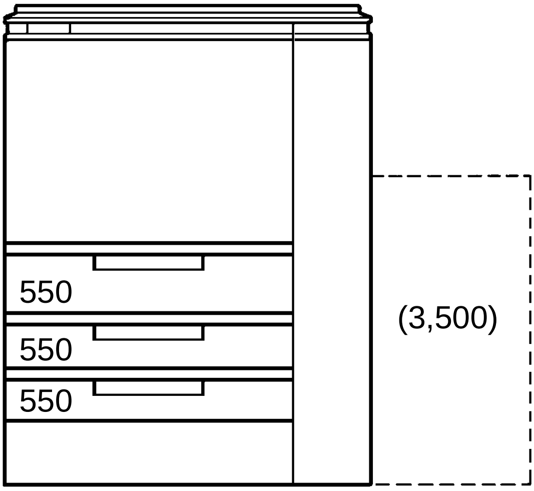
2. MACHINE CONFIGURATION

2.1 COPIER OVERVIEW

There are two types of mainframe.

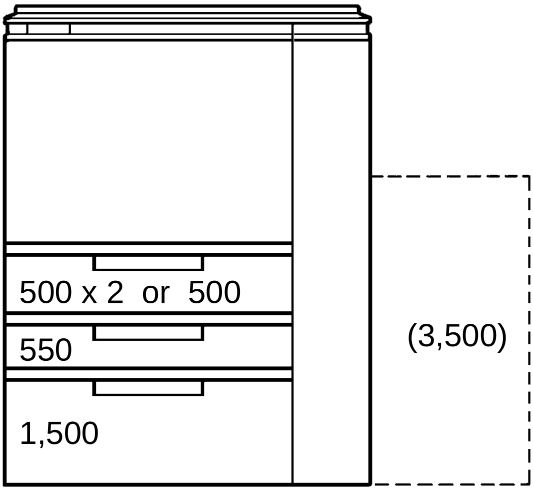
A095 copier

550-sheet paper trays
al 3,500-sheet large capacity tray


550
550
550
(3,500)

A096 copier

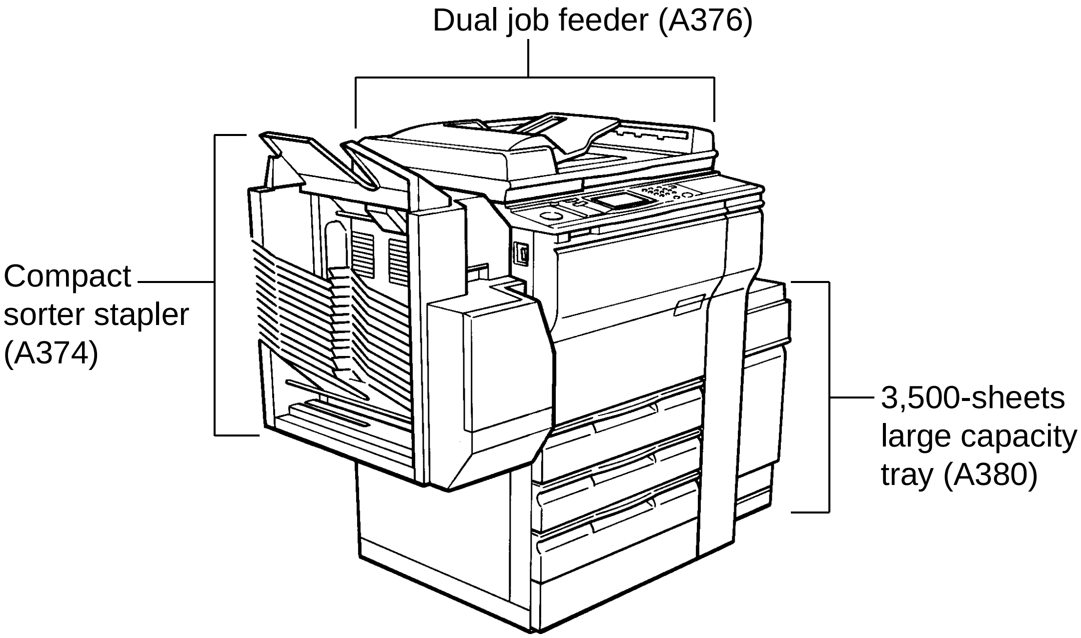
em paper tray
ding two 500-sheet paper tray)
50-sheet paper tray
-sheet built-in large capacity tray
al 3,500-sheet large capacity tray


500 x 2 or 500
550
1,500
(3,500)

2.2 SYSTEM OVERVIEW

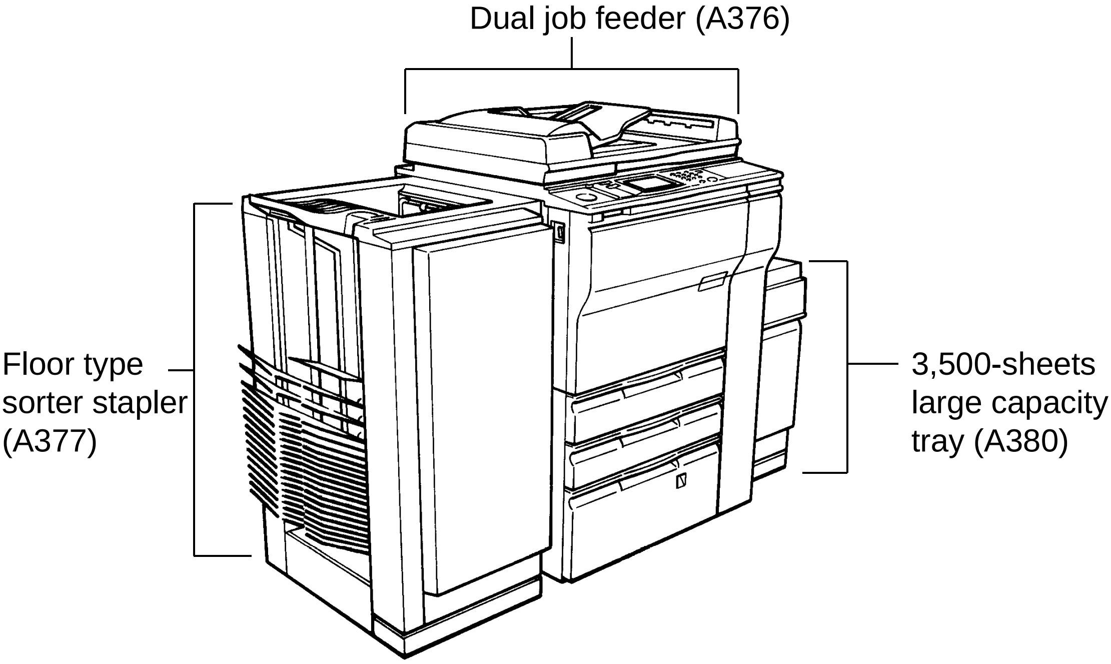
System A

(The mainframe (A095) with dual job feeder and compact sorter stapler)


Dual job feeder (A376)
Compact sorter stapler (A374)
3,500-sheets large capacity tray (A380)

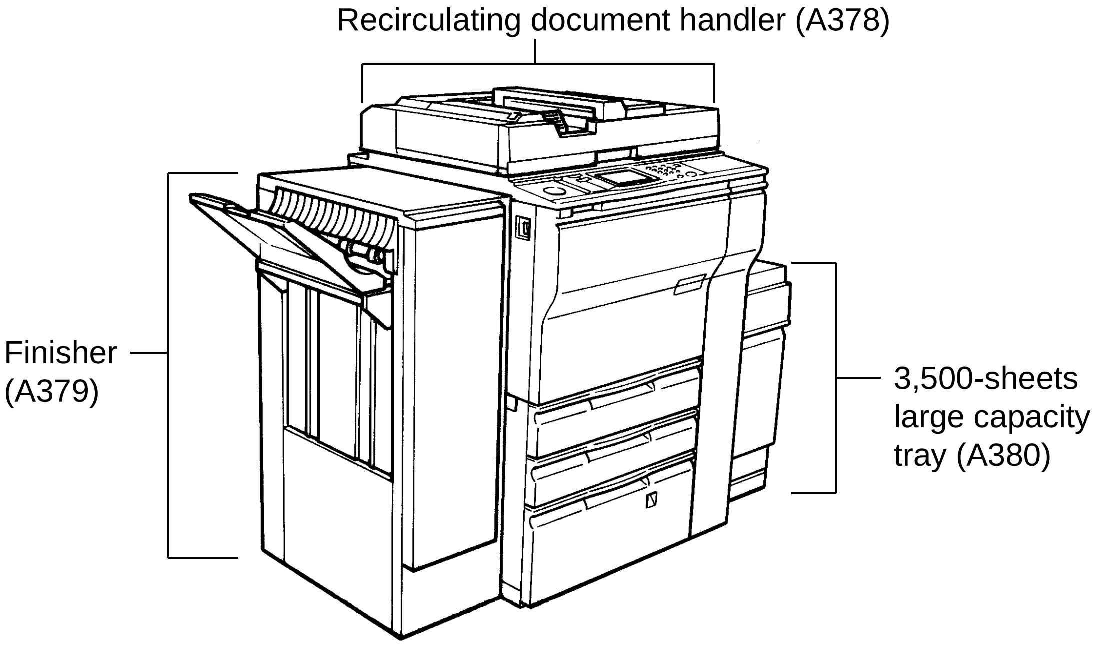
System B

(Mainframe type (A095/A096) with dual job feeder and floor type sorter stapler. The mainframe in the illustration below is the A096.)

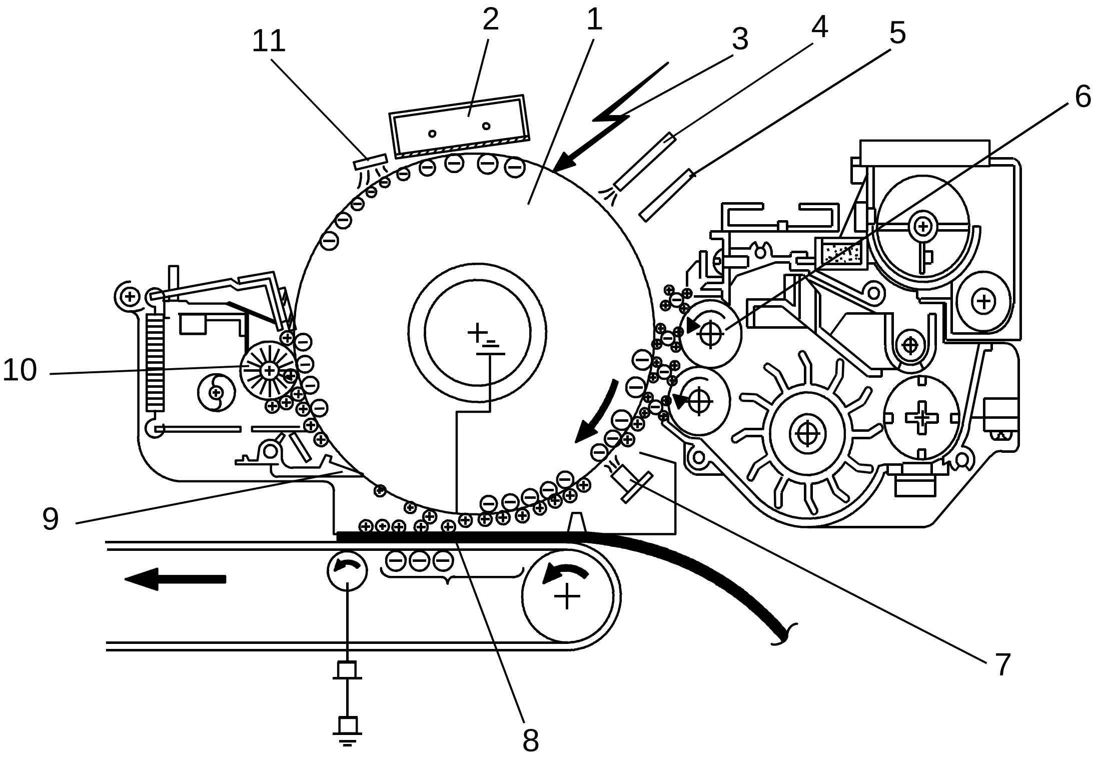

Dual job feeder (A376)
Floor type sorter stapler (A377)
3,500-sheets large capacity tray (A380)

System C

(The mainframe (A096) with recirculating document handler and finisher)


Recirculating document handler (A378)
Finisher (A379)
3,500-sheets large capacity tray (A380)

3. COPY PROCESS AROUND THE DRUM



1. OPC DRUM

The organic photo conductive (OPC) drum (100 mm diameter) has high resistance in the dark and low resistance under light.

2. DRUM CHARGE

In the dark, the charge corona unit gives a uniform negative charge to the OPC drum. The charge remains on the surface of the drum. The amount of negative charge on the drum is proportional to the negative grid bias voltage applied to the grid plate on the charge corona unit.

3. EXPOSURE

An image of the original is reflected to the OPC drum surface via the optics section. The charge on the drum surface is dissipated in direct proportion to the intensity of the reflected light, thus producing an electrical latent image on the drum surface.

The amount of charge remaining as a latent image on the drum depends on the exposure lamp intensity controlled by the exposure lamp voltage.

4. ERASE

The erase lamp illuminates the areas of the charged drum surface that will not be used for the copy image. The resistance of drum in the illuminated areas drops and the charge on those areas dissipates.

5. DRUM POTENTIAL SENSOR

The drum potential sensor detects the electric potential on the drum to compensate image processing elements.

6. DEVELOPMENT

Positively charged toner is attracted to the negatively charged areas of the drum, thus developing the latent image. (The positive triboelectric charge of the toner is caused by friction between the carrier and toner particles.)

The development bias voltage applied to the development roller shaft controls two things:

1) The threshold level if toner is attracted to the drum or toner remains on the development roller.
2) The amount of toner to be attracted to the drum.

The higher the negative development bias voltage is, the less toner is attracted to the drum surface.

7. PRE-TRANSFER LAMP (PTL)

The PTL illuminates the drum to remove almost all the negative charge from the exposed areas of the drum. This makes image transfer easier.

8. IMAGE TRANSFER

Paper is fed to the drum surface at the proper timing so as to align the copy paper and the developed image on the drum surface. Then, a negative charge is applied to the reverse side of the copy paper by the transfer belt, producing an electrical force which pulls the toner particles from the drum surface onto the copy paper. At the same time, the copy paper is electrically attracted to the transfer belt.

9. PAPER SEPARATION

Paper separates from the OPC drum by the electrical attraction between the paper and the transfer belt. The pick-off pawls help to separate the paper from the drum.

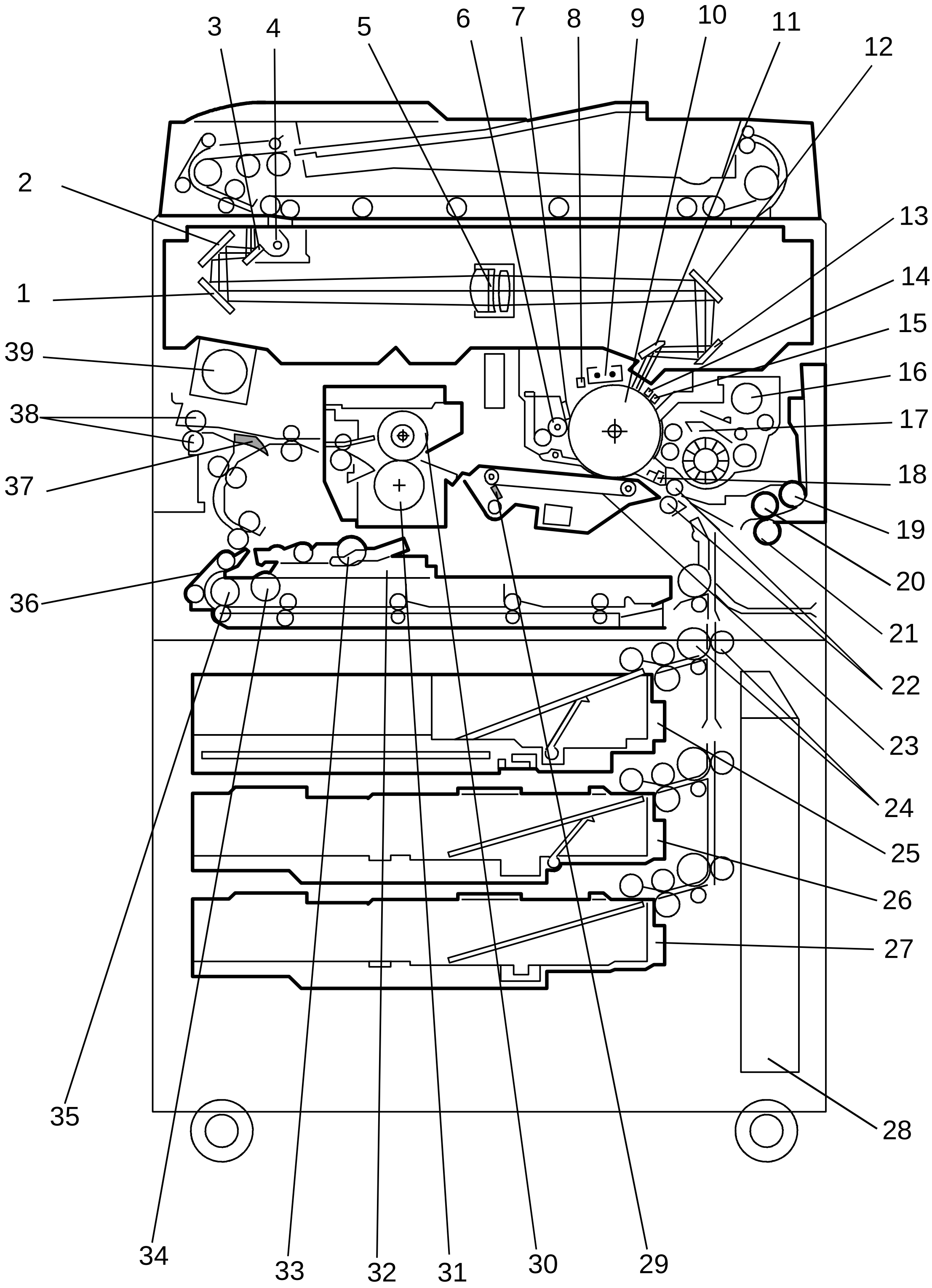
10. CLEANING

The cleaning brush removes toner remaining on the drum after image transfer and the cleaning blade scrapes off all the remaining toner.

11. QUENCHING

Light from the quenching lamp electrically neutralizes the charge potential of the drum surface.

4. MECHANICAL COMPONENT LAYOUT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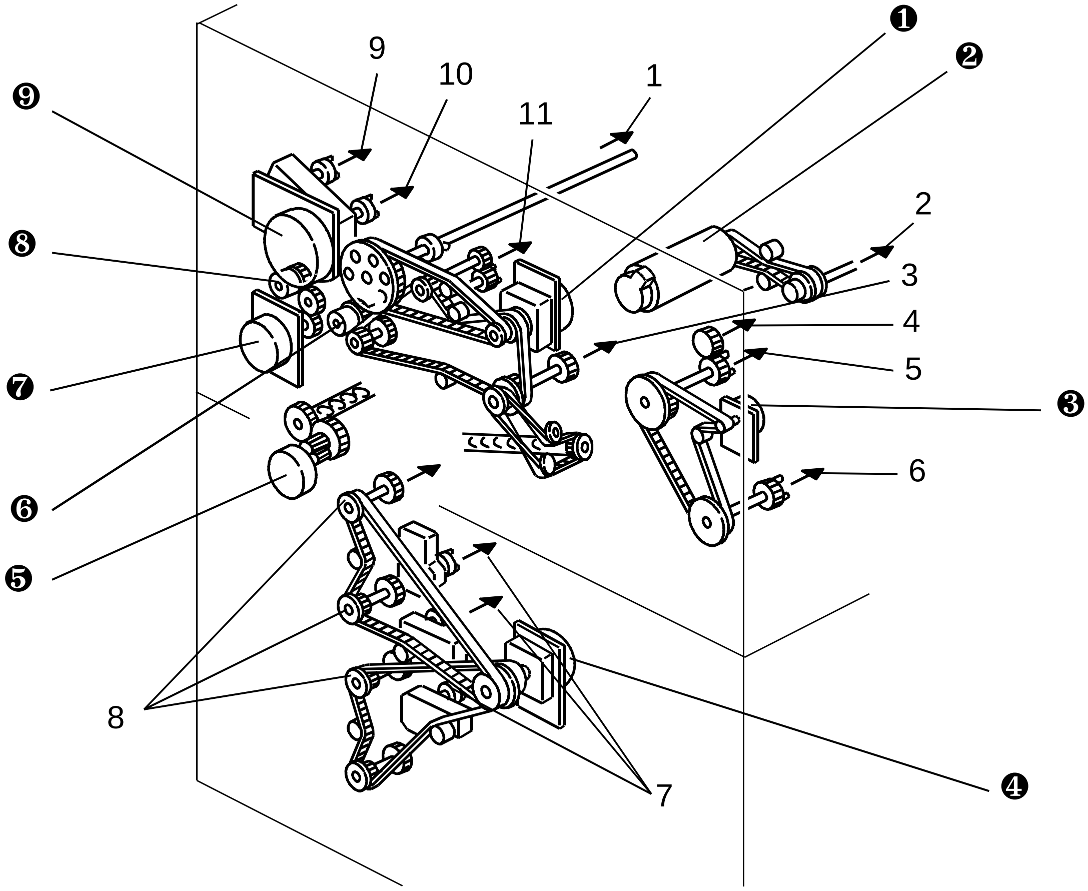
1. 3rd Mirror
2. 2nd Mirror
3. 1st Mirror
4. Exposure Lamp
5. Lens
6. Cleaning Brush
7. Cleaning Blade
8. Quenching Lamp
9. Charge Corona Unit
10. OPC Drum
11. 6th Mirror
12. 4th Mirror
13. 5th Mirror
14. Erase Unit
15. Drum Potential Sensor
16. Toner Hopper
17. Development Unit
18. Pre-Transfer Lamp
19. Pick-up Roller
20. Feed Roller
21. Separation Roller
22. Registration Rollers
23. Transfer Belt
24. Vertical Transport Rollers
25. Tandem Tray (A096 copier)
    550-sheet Tray (A095 copier)
26. Universal Tray
27. 1500-sheet LCT (A096 copier)
    550-sheet Tray (A095 copier)
28. Toner Collection Bottle
29. Transfer Belt Cleaning Blade
30. Hot Roller
31. Pressure Roller
32. Jogger Fences
33. Duplex Positioning Roller
34. Duplex Pick-up Roller
35. Duplex Feed Roller
36. Separation Belt
37. Junction Gate
38. Exit Rollers
39. Optics Cooling Fan

5. DRIVE LAYOUT



❶ Main Motor

❷ Scanner Drive Motor

❸ Fusing/Duplex Drive Motor

❹ Paper Feed Motor

❺ Toner Collection Motor

❻ Registration Clutch

❼ By-Pass Feed Motor

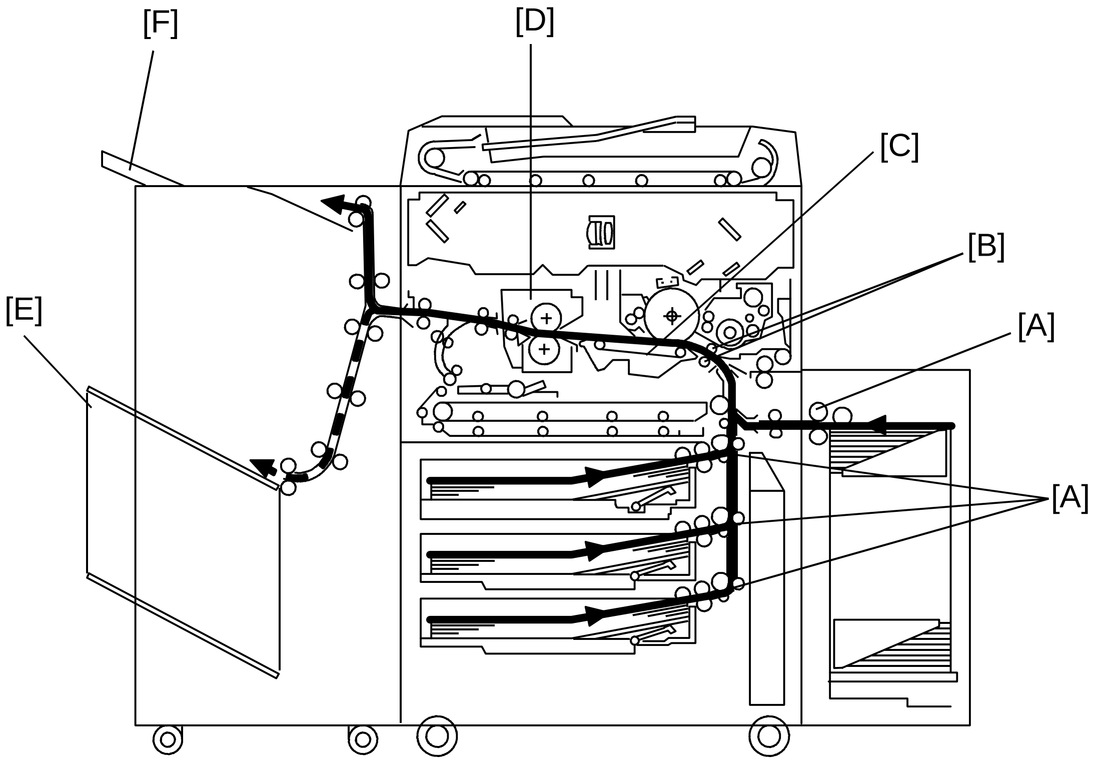
❽ BY-Pass Feed Clutch

❾ Development Drive Motor

1. OPC Drum
2. Scanner Unit
3. Transfer Belt Unit
4. Paper Exit Unit
5. Fusing Unit
6. Duplex Unit
7. Paper Trays
8. Paper Feed Units
9. Toner Hopper
10. Development Unit
11. Cleaning Unit

6. PAPER PATH

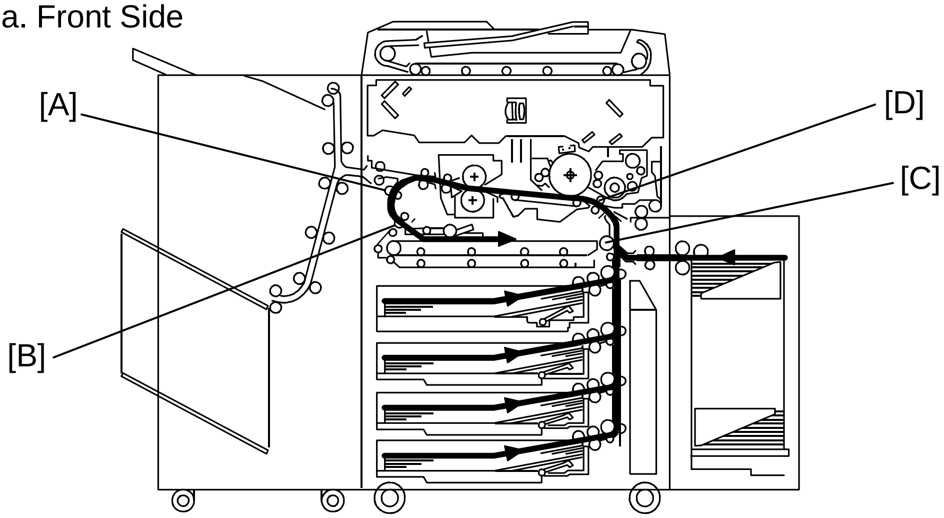
6.1 STANDARD COPYING



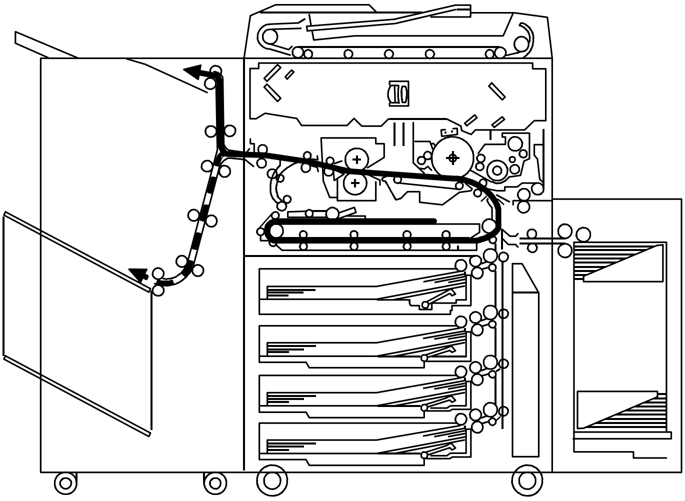
Paper feed begins from the exterior LCT, by-pass feed table or paper feed stations in the paper tray unit. The copy paper then follows one of two paths inside the copier. The path followed depends on which mode the operator has selected. For copy processing, all sheets follow the same paths from the paper feed mechanism [A] through the registration rollers [B], transfer belt [C], and fusing unit [D]. After that, copies are delivered to the sorter bins [E] or proof tray [F], however, 2 sided copies are diverted for further processing.

6.2 MULTIPLE 2-SIDED COPYING

a. Front Side



b. Rear Side



In this mode the junction gate [A] directs sheets exiting the fusing unit to the duplex tray entrance. After that, all sheets follow the path through the duplex entrance rollers [B].

After all front side copying is completed, the sheets on the duplex tray are fed in order from the bottom to the top and follow the path through the duplex feed mechanism and vertical transport rollers [C] to the registration rollers [D]. After that, these sheets follow the same path as standard copying from the registration rollers to the sorter.

7. ELECTRICAL COMPONENT DESCRIPTION

Refer to the electrical component layout on the reverse side of the attached Point to Point for symbols and index numbers.

Symbol	Name	Function	Index No.
Motors			
M 1	Scanner Drive	Drives the 1st and 2nd scanners (dc servo).	42
M 2	Exhaust Fan	Removes the heat from around the fusing unit.	43
M 3	Main	Drives the main unit components.	44
M 4	Development Drive	Drives the development unit.	45
M 5	By-pass Feed	Drives the by-pass feed rollers.	46
M 6	3rd Scanner Drive	Drives the 3rd scanner (dc stepper)	47
M 7	Toner Bottle Drive	Rotates the toner bottle to supply toner to the toner hopper.	48
M 8	Charge Wire Cleaner Drive	Drives the main charge wire cleaner to clean the charge wire.	49
M 9	Jogger	Drives the jogger fences to square the paper stack in the duplex tray (dc stepper).	50
M10	Lens Horizontal Drive	Shifts the lens horizontal position.	51
M11	Lens Vertical Drive	Shifts the lens vertical position.	52
M12	Optic Cooling Fan	Removes heat from the optics unit.	53
M13	Fusing/Duplex Drive	Drives the fusing unit, the duplex unit, and the paper exit rollers.	54
M14	Paper Feed	Drives all feed and transport rollers in the paper tray unit.	90
M15	1st Lift	Raises the bottom plate in the 1st paper tray.	91
M16	2nd Lift	Raises the bottom plate in the 2nd paper tray.	92
M17	Toner Collection	Transports the collected toner to the toner collection bottle.	93

Symbol	Name	Function	Index No.
M18	3rd Lift (A095 copier only)	Raises the bottom plate in the 3rd paper tray.	94
M19	Side Fence Drive (A096 copier only)	Opens and closes the front and the rear side fences of the tandem tray.	95
M20	Rear Fence Drive (A096 copier only)	Moves the papers stacked in the left tandem tray to the right tandem tray.	96
M21	LCT Motor (A096 copier only)	Lifts and lowers the LCT bottom plate to bring paper to the feed position and allow loading of the paper.	127
Magnetic Clutches			
MC1	Toner Supply	Turns the toner supply roller to supply toner to the development unit.	57
MC2	Registration	Drives the registration rollers.	58
MC3	By-pass Feed	Starts paper feed from the by-pass feed table.	60
MC4	Duplex Transport	Drives the duplex transport rollers to transport the paper to the vertical transport rollers.	64
MC5	Duplex Feed	Starts paper feed from the duplex tray to the duplex transport rollers.	65
MC6	1st Feed	Starts paper feed from the 1st feed tray.	99
MC7	2nd Feed	Starts paper feed from the 2nd feed tray.	101
MC8	3rd Feed	Starts paper feed from the 3rd feed tray.	104

Symbol	Name	Function	Index No.
Switches			
SW1	By-pass Table	Detects if the by-pass feed table is open or closed.	25
SW2	Front Door Safety	Cuts the ac power line and detects if the front door is open or not.	29
SW3	1st Tray Set (A095 copier only)	Detects if the 1st tray is set or not.	66
SW4	2nd Paper Size	Determines what size paper is in the 2nd (universal) paper tray.	67
SW5	Toner Overflow	Detects when the toner collection bottle is full.	75
SW6	Toner Collection Bottle Set	Detects if the toner collection bottle is set or not.	77
SW7	Lower Front Door Safety	Detects if the front door is open or not.	83
SW8	3rd Tray Set (A095 copier only)	Detects if the 3rd tray is set or not.	84
SW9	Main	Provides power to the copier	122
SW10	Tray Down (A096 copier only)	Lowers the LCT bottom plate.	126
Solenoids			
SOL 1	Junction Gate	Moves the junction gate to direct copies to the duplex tray or to the paper exit.	55
SOL 2	Duplex Positioning	Controls the up-down movement of the positioning roller.	56
SOL 3	By-pass Pick-up	Controls the up-down movement of the pick-up roller for by-pass feed.	59
SOL 4	Guide Plate	Opens the guide plate when a paper misfeed occurs around this area.	61
SOL 5	Transfer Belt Positioning	Controls the up-down movement of the transfer belt unit.	62

Symbol	Name	Function	Index No.
SOL 6	Pressure Arm	Presses the paper on the duplex tray against the duplex feed rollers.	63
SOL 7	Tandem Lock	Locks the left tandem feed tray and separates the right and left tandem trays.	97
SOL 8	1st Pick-up	Controls the up-down movement of the pick-up roller in the 1st feed station.	98
SOL 9	1st Separation Roller	Controls the up-down movement of the separation roller in the 1st feed station.	100
SOL10	2nd Pick-up	Controls the up-down movement of the pick-up roller in the 2nd feed station.	102
SOL11	2nd Separation Roller	Controls the up-down movement of the separation roller in the 2nd feed station.	103
SOL12	3rd Pick-up	Controls the up-down movement of the pick-up roller in the 3rd feed station.	105
SOL13	3rd Separation Roller	Controls the up-down movement of the separation roller in the 3rd feed station.	106
Sensors			
S 1	Scanner HP	Informs the CPU when the 1st and 2nd scanners are at the home position.	1
S 2	Platen Cover Position–1	Informs the CPU that the platen cover is in the up or down position (related to APS/ARE function).	2
S 3	Platen Cover Position–2	Informs the CPU that the platen cover is in the up or down position to detect if the original has been removed or not.	3

Symbol	Name	Function	Index No.
S 4	Lens Vertical HP	Informs the CPU that the lens is at the full-size position.	4
S 5	Lens Horizontal HP	Informs the CPU that the lens is at the horizontal home position.	5
S 6	3rd Scanner HP	Informs the CPU when the 3rd scanner is at the home position.	6
S 7	By-Pass Paper End	Informs the CPU that there is no paper in the by-pass feed table.	7
S 8	Guide Plate Position	Informs the CPU if the registration guide plate is closed or not.	8
S 9	Jogger HP	Detects if the duplex jogger fences are at the home position or not.	9
S10	Vertical Transport	Detects the leading edge of the paper to determine the paper feed timing of the next sheet.	10
S11	Duplex Exit	Detects the leading edge of the paper to determine the duplex transport clutch on timing.	11
S12	Duplex Entrance Sensor	Detects the leading edge of the paper to determine the duplex feed clutch off timing.	12
S13	Duplex Paper End	Detects paper in the duplex tray.	13
S14	Duplex Transport	Detects the leading edge of the paper to control the jogger motor and the positioning solenoid on timing.	14
S15	Exit	Detects misfeeds.	15
S16	Fusing Exit	Detects misfeeds.	16
S17	Paper Guide	Detects misfeeds.	17
S18	Auto Image Density	Senses the background density of the original.	20
S19	Original Length–1	Detects original length.	21
S20	Original Length–2	Detects original length.	22
S21	Original Width	Detects original width.	23

Symbol	Name	Function	Index No.
S22	By-Pass Paper Size	Informs the CPU what size paper is in the by-pass feed table.	26
S23	Toner Density	Senses the amount of toner in the black developer.	27
S24	Registration	Detects misfeeds and controls registration clutch off-on timing.	28
S25	Toner End	Detects toner end condition.	30
S26	Auto-Response	Returns the display from the screen saver.	34
S27	Drum Potential	Detects the drum surface potential.	39
S28	Image Density	Detects the density of the ID sensor pattern on the drum.	41
S29	1st Paper End	Informs the CPU when the 1st cassette runs out of paper.	68
S30	1st Paper Near End	Informs the CPU when the 1st cassette is in near end condition.	69
S31	1st Paper Feed	Controls the 1st paper feed clutch off/on timing and the 1st pick-up solenoid off timing.	70
S32	2nd Paper Near End	Informs the CPU when the 2nd cassette is in near end condition.	71
S33	1st Lift	Detects the correct feed height of the 1st cassette.	72
S34	2nd Paper End	Informs the CPU when the 2nd cassette runs out of paper.	73
S35	Toner Collection Motor	Detects the toner collection motor operation.	74
S36	2nd Lift	Detects the correct feed height of the 2nd cassette.	76
S37	3rd Lift	Detects the correct feed height of the 3rd cassette.	78
S38	3rd Paper Near End (A095 copier only)	Informs the CPU when the 3rd cassette is in near end condition.	79
S39	3rd Paper End	Informs the CPU when the 3rd cassette runs out of paper.	80

Symbol	Name	Function	Index No.
S40	3rd Paper Feed	Controls the 3rd paper feed clutch off/on timing and the 3rd pick-up solenoid off timing.	81
S41	2nd Paper Feed	Controls the 2nd paper feed clutch off/on timing and the 2nd pick-up solenoid off timing.	82
S42	Base Plate Down (A096 copier only)	Detects when the bottom plate is completely lowered to stop the 1st lift motor.	85
S43	Side Fence Positioning (A096 copier only)	Informs the CPU when the tandem tray side fences are open.	86
S44	Rear Fence Return (A096 copier only)	Informs the CPU when the tandem tray rear fence is in the return position.	87
S45	Rear Fence HP (A096 copier only)	Informs the CPU when the tandem tray rear fence is in the home position.	88
S46	Left Tandem Paper End (A096 copier only)	Informs the CPU when the left tandem tray runs out of paper.	89
S47	LCT Near End (A096 copier only)	Detects the paper near end condition.	123
S48	Tray Down (A096 copier only)	Detects when the tray is completely lowered to stop the LCT motor.	124
S49	Tray Paper Set (A096 copier only)	Informs the CPU when the paper is set on the LCT bottom tray.	125
PCBs			
PCB 1	AC Drive	Provides AC power to the exposure lamp and fusing lamp.	108
PCB 2	Main	Controls all machine functions.	109
PCB 3	Optic Control	Controls all optics components.	110
PCB 4	High Voltage Control	Controls the output of both power packs and development bias.	111

Symbol	Name	Function	Index No.
PCB 5	Paper Feed Control	Controls all components in the paper bank.	112
PCB 6	DC Power Supply Unit	Provides DC power.	113
PCB 7	Guidance	Controls the guidance display.	120
PCB 8	Operation Panel	Controls the LED matrix, and monitors the key matrix.	121
Lamps			
L1	Exposure	Applies high intensity light to the original for exposure.	18
L2	Fusing	Provides heat to the hot roller.	32
L3	Quenching	Neutralizes any charge remaining on the drum surface after cleaning.	37
L4	Erase	Discharges the drum outside the image area.	38
L5	Pre-transfer	Reduces the charge on the drum surface before transfer.	40
Power Packs			
PP1	Transfer	Provides high voltage for the transfer belt and controls the transfer belt positioning solenoid.	117
PP2	Charge	Provides high voltage for the charge corona wires, and the grid plate. Controls QL, PTL, and charge wire cleaner motor functions.	119
Others			
TS1	Optics Thermoswitch	Opens the exposure lamp circuit if the optics unit overheats.	19
TF1	Fusing Thermofuse	Opens the fusing lamp circuit if the fusing unit overheats.	33
TH1	Fusing Thermistor	Senses the temperature of the hot roller.	24

Symbol	Name	Function	Index No.
TH2	Optics Thermistor	Monitors the temperature of the optics cavity.	36
TH3	Drum Thermistor (Located on the ID Sensor Ass’y)	Monitors the temperature of the OPC drum.	41
H1	Transfer Anti-Condensation	Turns on when the main switch is off to prevent moisture from forming on the transfer belt.	31
H2	Optics Anti-Condensation	Turns on when the main switch is off to prevent moisture from forming on the optics.	35
RA1	Main Power Relay	Controls main power.	107
CO1	Total Counter	Keeps track of the total number of copies made.	114
NF1	Noise Filter	Removes electrical noise.	115
CB1	Circuit Breaker	Provides back-up high current protection for the electrical components.	116
LA1	Lightening Arrestor	Removes current surges from the AC input lines.	118

SECTION 2

DETAILED SECTION DESCRIPTIONS

1. PROCESS CONTROL

1.1 OVERVIEW

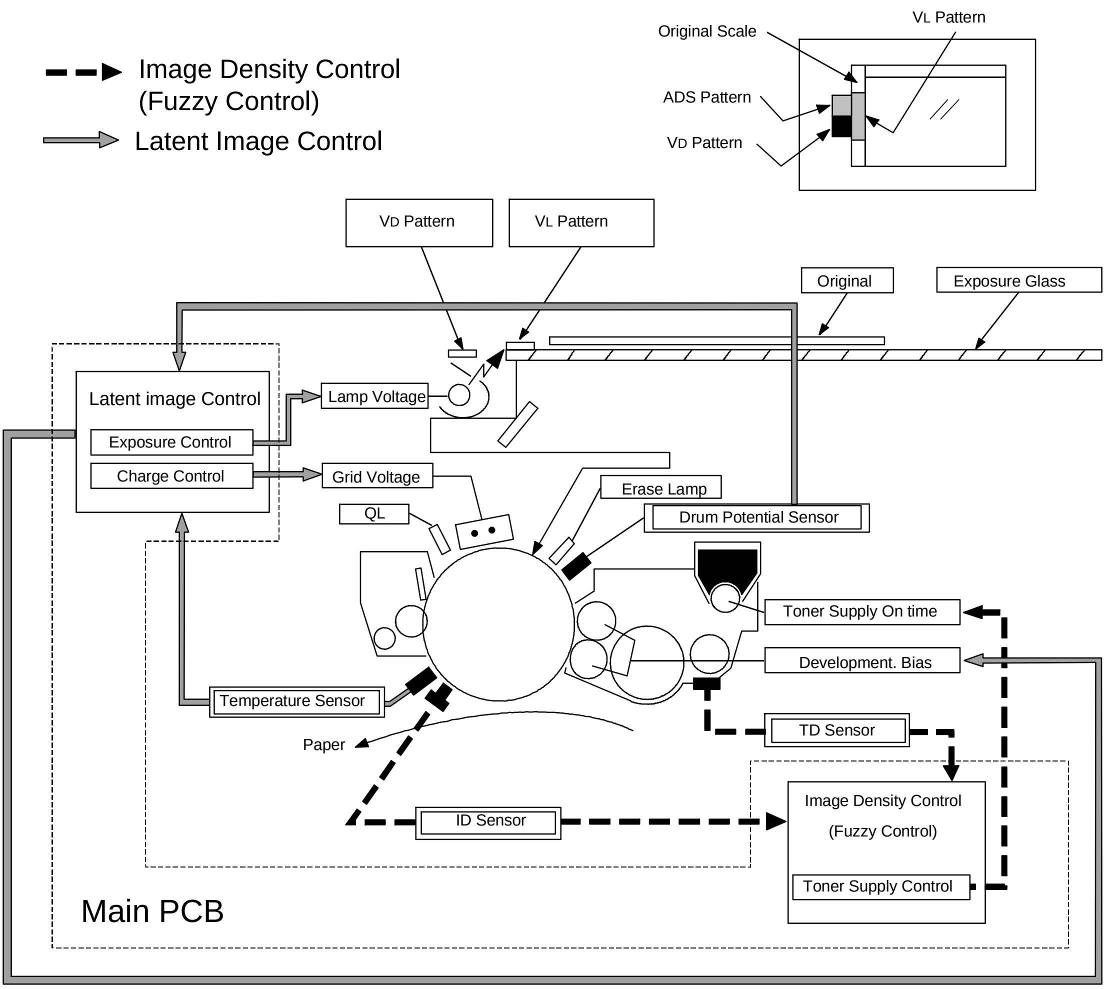
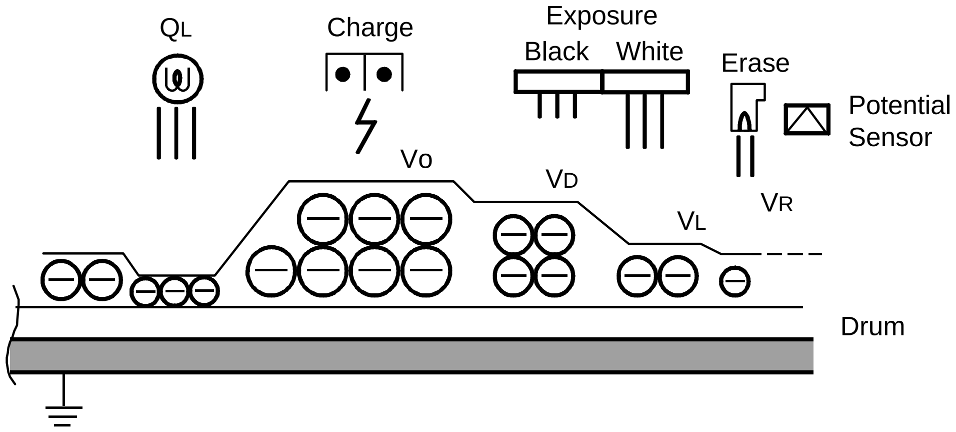


Image Density Control
(Fuzzy Control)
Latent Image Control
Original Scale
VL Pattern
ADS Pattern
VD Pattern
VD Pattern
VL Pattern
Original
Exposure Glass
Latent image Control
Exposure Control
Charge Control
Lamp Voltage
Grid Voltage
QL
Erase Lamp
Drum Potential Sensor
Toner Supply On time
Development. Bias
Temperature Sensor
Paper
TD Sensor
ID Sensor
Image Density Control
(Fuzzy Control)
Toner Supply Control
Main PCB

This model uses two process control methods. One compensates for variation in the drum potential (latent image control) and the other controls the toner concentration and toner supply amount (image density control).

1.1.1 Latent Image Control



The figure shows the changes of the drum potential during the copy process.

V_O:	The drum potential just after charging the drum.
V_D (Dark Potential):	The drum potential just after exposing the black pattern (V_D pattern)
V_L (Light Potential):	The drum potential just after exposing the white pattern (V_L pattern)
V_R (Residual Voltage):	The drum potential just after the exposure of the erase lamp.

After long usage following installation or a PM, drum potential will gradually increase due to the following factors:

Dirty optics or exposure lamp deterioration

Dirty charge corona wire and grid plate

Change of the drum sensitivity

In this copier, the change in drum potential is detected by the drum potential sensor and the following items are controlled to maintain good copy quality.

The grid bias voltage

The exposure lamp voltage

The development bias voltage.

A drum thermistor detects the drum temperature and this data is also used to control the above voltages. It is impossible to explain simply because it is controlled by methods developed in our laboratories using an artificial neural network.

1.1.2 Image Density Control

Image density is controlled by the following sensors:

Toner density sensor (TD sensor)

Image density sensor (ID sensor)

Data from the TD sensor is used to keep the toner concentration in the developer at a constant level. However, the image on the OPC drum varies due to the variation of toner chargeability (influenced by the environment) even if the toner concentration is constant. By the ID sensor compensation, toner concentration is changed to keep the image density on the OPC drum constant.

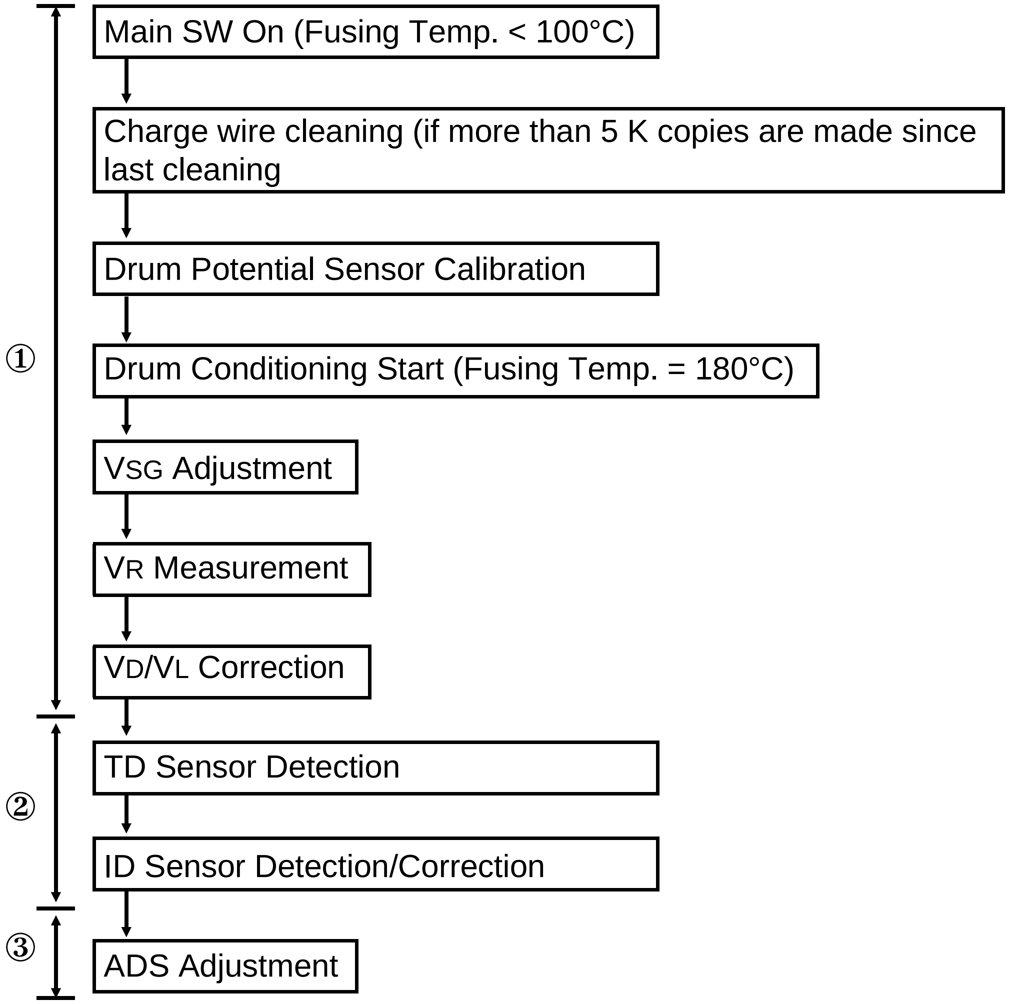
The following items are controlled to maintain a constant copy image density:

Toner supply clutch on time

Toner supply level data (V_{REF}) of the TD sensor

1.2 PROCESS CONTROL DATA INITIAL SETTING

The following flow chart shows all the steps that will be performed whenever the machine is turned on while the hot roller temperature is below 100°C. This initializes all the process control settings.


Main SW On (Fusing Temp. < 100°C)
Charge wire cleaning (if more than 5 K copies are made since last cleaning
Drum Potential Sensor Calibration
Drum Conditioning Start (Fusing Temp. = 180°C)
VSG Adjustment
VR Measurement
VD/VL Correction
TD Sensor Detection
ID Sensor Detection/Correction
ADS Adjustment
①
②
③

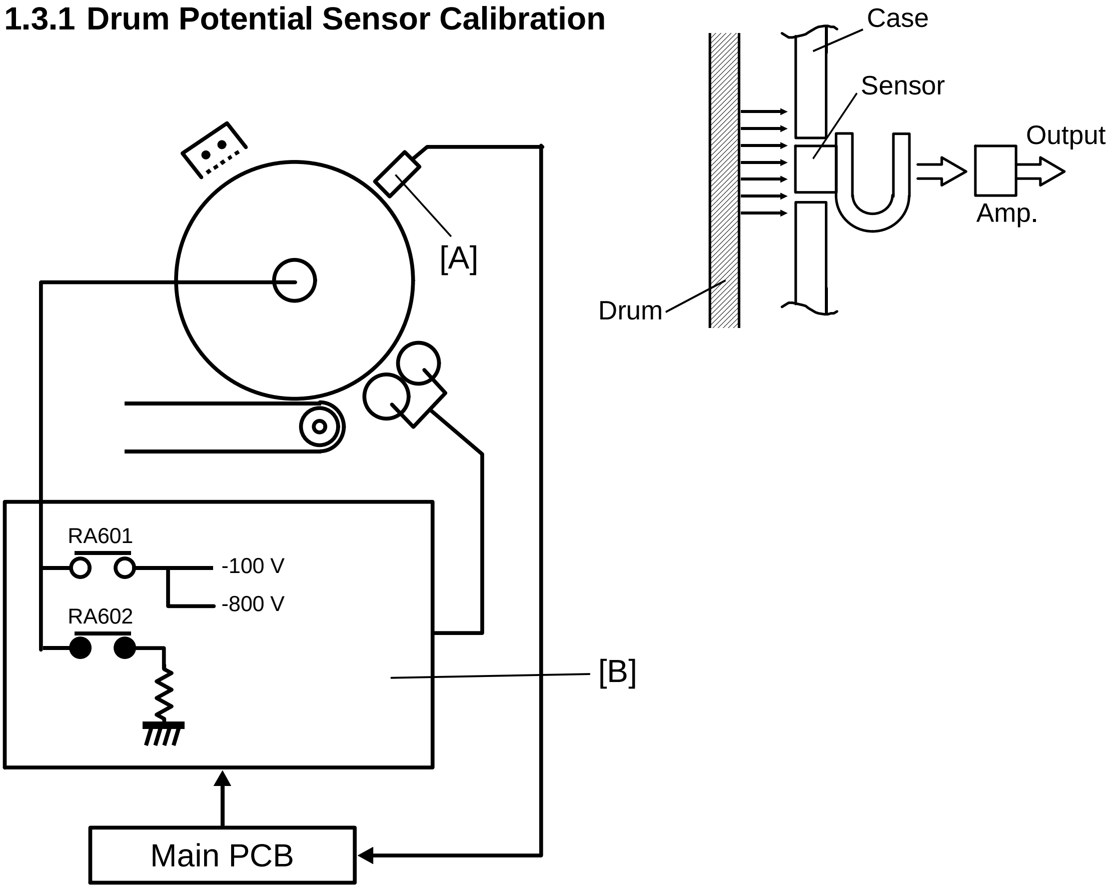
① : See Latent Image Control section (Page 2-5) for details.

② : See Image Density Control section (Page 2-12) for details.

③: See Optics section (Page 2-39) for details.

1.3 LATENT IMAGE CONTROL

1.3.1 Drum Potential Sensor Calibration



The drum potential sensor [A] is located just above the development unit. The sensor has a detector which detects the strength of the electric field from the electric potential on the drum. The output of the sensor depends on the strength of the electric field.

Since the output of the sensor is affected by environmental conditions, such as temperature and humidity, the sensor output is calibrated during process control data initial setting.

The High Voltage Control PCB [B] has two relay contacts. Usually RA602 grounds the drum. However, during the initial setting, the main PCB turns RA601 on and RA602 off and applies the voltage to the drum shaft.

By measuring the output of the drum potential sensor when –100 V and –800 V are applied to the drum, the sensor output is calibrated automatically. (The machine recognizes the relationship between actual drum potential and the potential sensor output.)

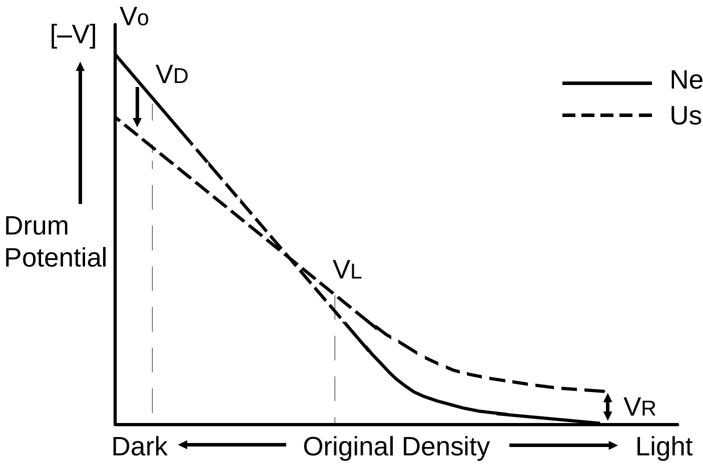
1.3.2 Drum Conditioning

When the fusing temperature reaches 180°C, the machine starts the drum conditioning process. In this mode, the main motor, main charge corona, erase lamp and development bias are activated for about 30 seconds and drum sensitivity and residual voltage (V_R) are stabilized, as in continuous copy runs.

1.3.3 V_{SG} Adjustment

During drum conditioning, the ID sensor checks the bare drum's reflectivity and calibrates the output of the ID sensor to 4 ±0.2 V.

1.3.4 V_R Measurement



The above figure shows the relationship between the drum potential and the original density. To get constant copy quality, this relationship must be maintained.

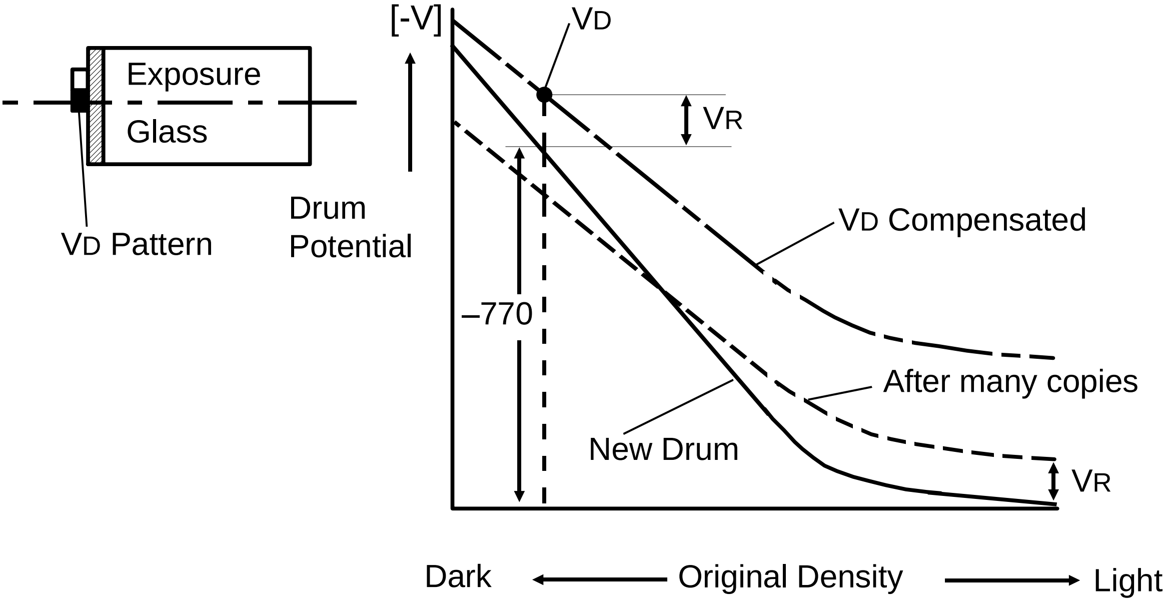
Since this relationship tends to change to the one represented by the dotted line by various factors, compensations are required.

The residual voltage (V_R) cannot be compensated even if the exposure lamp voltage is increased. Therefore, the V_R change has to be compensated by other means.

The main control board checks the drum potential just after the erase lamp exposure by the drum potential sensor after drum conditioning. This measured drum potential is in fact V_R. This V_R is used as the standard for the V_D and V_L corrections.

NOTE: In the figure above, the residual voltage (V_R) for the new drum is 0V. Actually, there is some residual voltage even on the new drum.

1.3.5 VD Correction


Exposure
Glass
VD Pattern
Drum
Potential
[-V]
VD
VR
VD Compensated
–770
After many copies
New Drum
VR
Dark
Original Density
Light

The drum potential just after the black pattern (VD Pattern) is exposed (VD: Dark Potential) tends to lower during drum life due to a decrease in the drum’s capacity to carry a charge.

To check the actual VD, the first scanner moves to the home position and the VD pattern (Black) stuck on the bottom side of the exposure glass bracket is exposed on the drum.

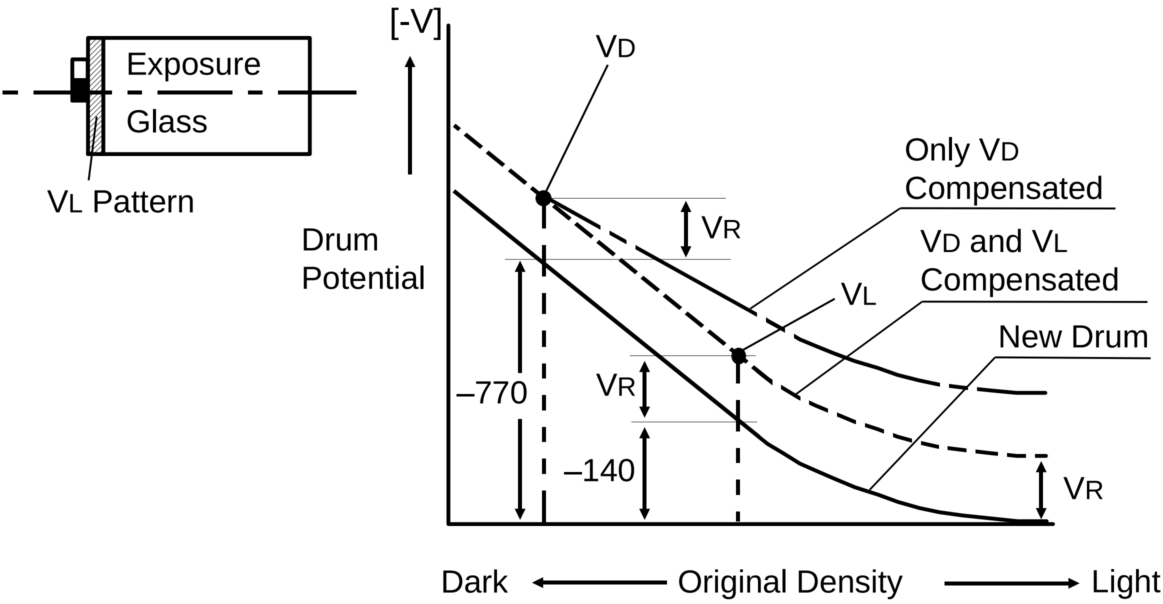
The main control board measures VD through the drum potential sensor and adjusts it to a target value by adjusting the grid bias voltage (VGRID).

On the other hand, there is a change of the drum residual voltage (VR), so that the target VD voltage is compensated as follows:

Target VD Value: VD = VR + (–770)

The adjusted grid bias voltage (VGRID) is kept in memory until the next process control data initial setting.

1.3.6 VL Correction



Dirty optics and/or exposure lamp deterioration decreases the intensity of the light that reaches the drum. In addition to this, the drum sensitivity also changes during the drum's life. These factors change the drum potential just after white pattern exposure (VL: Light Potential).

To check the actual VL, the first scanner moves under the VL pattern (White) stuck underneath the original scale. The pattern is exposed on the drum.

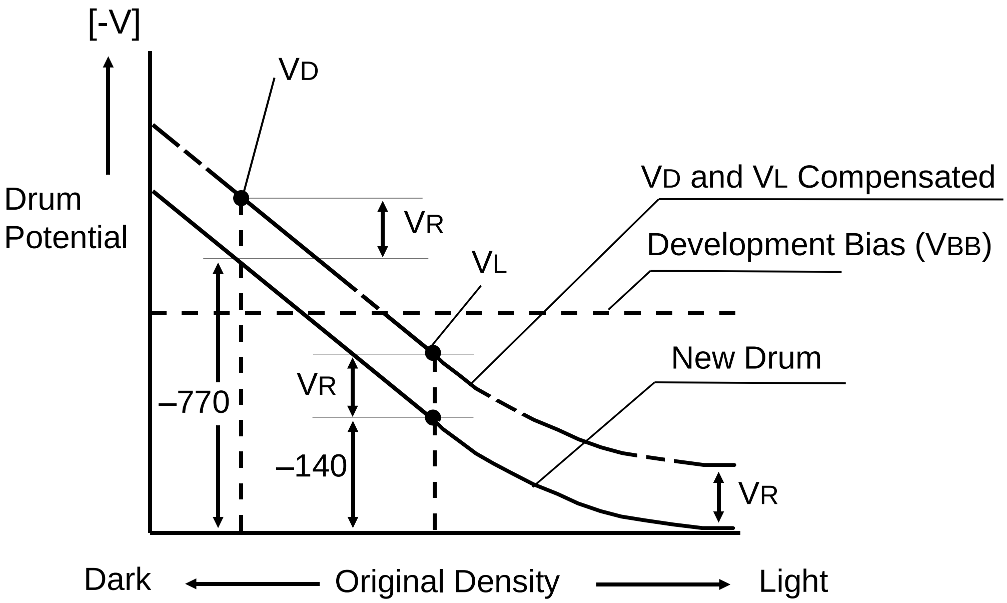
The main control board measures VL through the drum potential sensor and adjusts it to a target value by adjusting the exposure lamp voltage (VLAMP).

The residual voltage (VR) change also affects VL, so that VL's target voltage is compensated as follows:

Target VL Value: VL = VR + (–140)

The adjusted exposure lamp voltage (VLAMP) is stored in memory until the next process control data initial setting.

1.3.7 V_R Correction



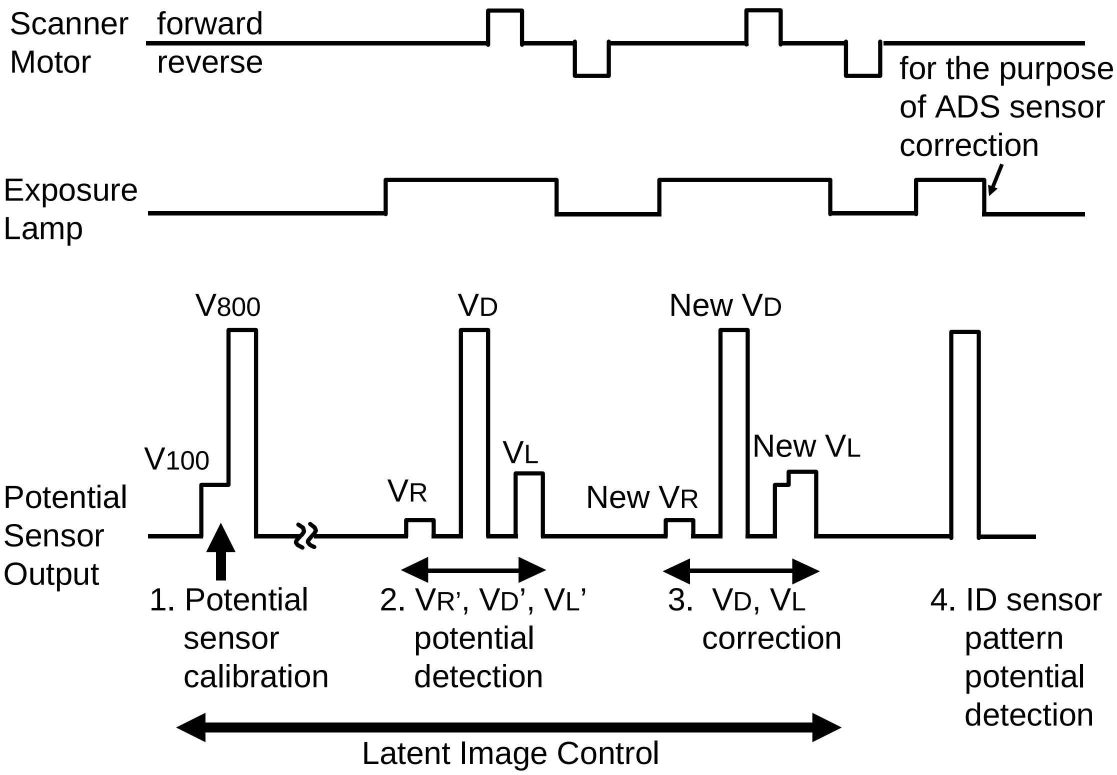
Potentials (V_R, V_D, V_L) are monitored by the potential sensor. (This is done only when the fusing temperature is less than 100°C after the machine is turned on.)
During the check cycle, the V_D and V_L patterns are exposed and the drum potential on the area where exposed by each pattern is checked by the potential sensor.

Compare the curve of the V_D and V_L compensated drum potential with the curve of the new drum, they are parallel but the compensated potential is still higher (V_R) than the new drum potential. To prevent dirty backgrounds due to increased residual potential, development bias (V_{BB}) is applied as follows:

$$V_{BB} = V_R + (-220)$$

1.3.8 Initial Setting Sequence

The following graph shows the sequence of events during process control data initial setting.


Scanner Motor
forward
reverse
for the purpose of ADS sensor correction
Exposure Lamp
V800
VD
New VD
V100
VL
New VL
VR
New VR
Potential Sensor Output
1. Potential sensor calibration
2. VR', VD', VL' potential detection
3. VD, VL correction
4. ID sensor pattern potential detection
Latent Image Control

1. Potential sensor calibration
   By measuring the output of the drum potential sensor when –100 V and –800 V are applied to the drum, the sensor output (V100 and V800) is calibrated automatically (See page 2-5 for details).

2. VR, VD, VL potential detection
   After about 30 seconds of drum conditioning, VD and VL Patterns are developed by using the previous grid bias voltage (VGRID) data and exposure lamp voltage (VLAMP) data to detect the VR, VD, VL data.

   The machine calculates the new VGRID and VLAMP data using the detected VR, VD, VL data.

3. V_D and V_L corrections
   Using the calculated V_{GRID} and V_{LAMP} data, V_R, V_D, and V_L patterns are developed again and the new V_R, V_D, and V_L data are detected.

   If both V_D and V_L data are within specifications, the new V_{GRID}, V_{LAMP} and development bias (V_{BB}) are determined based on the new V_D, V_L, and V_R values.

Specifications:

$$V_D = -770 + V_R \pm 20\ \text{V}$$

$$V_L = -140 + V_R \pm 20\ \text{V}$$

If V_D is outside specifications, V_{GRID} is shifted one step. Then the V_D pattern is measured again and V_D is detected again.
The same is done for V_L and V_{LAMP}.
The above process continues until both V_D and V_L fall within specifications.
The graph on the previous page shows the example when only V_L was outside specifications at the first V_L detection and it became within specifications after one V_L correction (V_{LAMP} is changed 0.5V/step , V_{GRID} is changed 20V/step).

If V_{100} or V_{800} at drum potential sensor calibration is outside specifications or if V_D or V_L do not fall within specifications after V_{GRID} or V_{LAMP} are shifted to the maximum or minimum level, the machine stops V_D or V_L correction and uses the previous V_{GRID} and V_{LAMP} values during copying.
In this case, nothing is indicated on the machine but the SC counter is incremented.

Related SC codes (see troubleshooting section for details):

Code	Condition
361	Incomplete drum potential sensor calibration
364	Abnormal V_D detection
365	Abnormal V_L detection

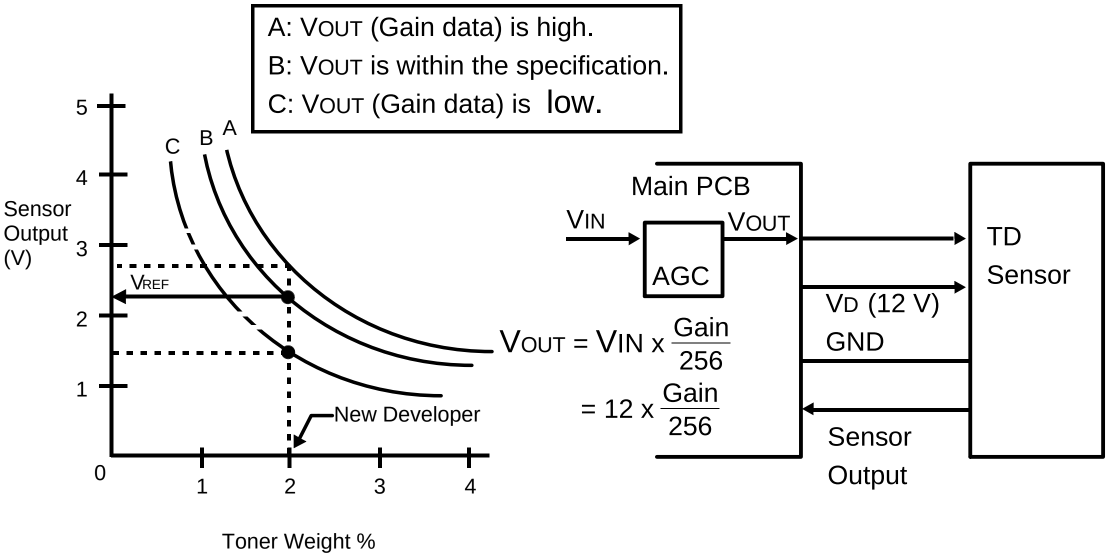
Development bias is also decided by using V_R as follows.

$$V_{BB} = V_R + (-220)$$

4. ID sensor pattern potential detection
   This is performed to determine ID Sensor Bias Voltage. The details are explained in the development control section (see page 2-16).

1.4 IMAGE DENSITY CONTROL

1.4.1 Toner Density Sensor


A: VOUT (Gain data) is high.
B: VOUT is within the specification.
C: VOUT (Gain data) is low.
Sensor Output (V)
5
4
3
2
1
0
C
B
A
VREF
New Developer
1
2
3
4
Toner Weight %
Main PCB
VIN
VOUT
AGC
VOUT = VIN x Gain/256
= 12 x Gain/256
TD Sensor
VD (12 V)
GND
Sensor Output

Developer consists of carrier particles (iron) and toner particles (resin and carbon). Inside the development unit, developer passes through a magnetic field created by coils inside the toner density sensor. When the toner concentration changes, the voltage output by the sensor changes accordingly.

<Toner Density Sensor Initial Setting>

When new developer with the standard toner concentration (2.0% by weight, 20 g of toner in 1000 g of developer) is installed, developer initial setting must be performed by using SP mode ($\boxed{1}$ SP Adjustment – PAGE 1).

During this setting, the output voltage (VOUT) from the auto gain control circuit (AGC) on the main control board PCB varies to change the output voltage from the toner density (TD) sensor. This is done by changing the gain data, see below.

$$V_{OUT} = V_{IN} \times \frac{\text{Gain Data}}{256} = 12 \times \frac{\text{Gain Data}}{256}$$

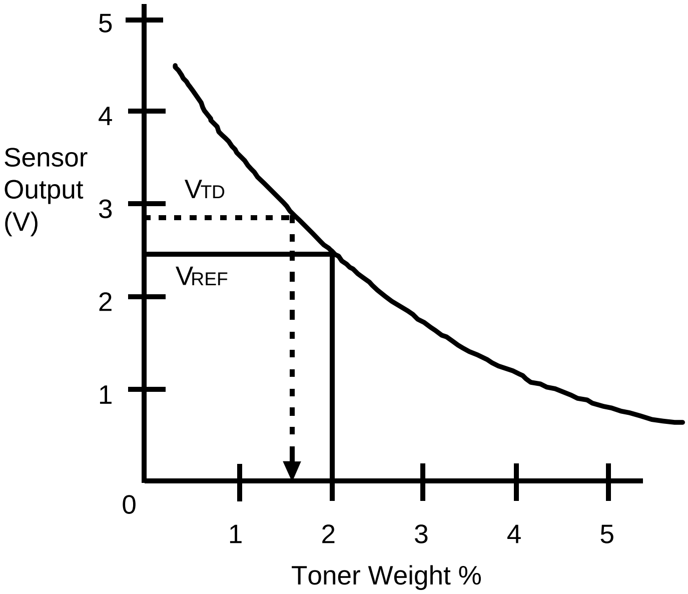
If the data is high, VOUT becomes high, and the sensor output voltage becomes high. As a result, the sensor characteristic becomes as illustrated by curve A. If the data is low, VOUT becomes low, and the sensor output voltage becomes low. As a result, the sensor characteristic shifts as illustrated by curve C.

By selecting the proper gain data, the sensor output is set within the targeted control level (V_{REF}, $V_{REF} = 2.5 \pm 0.1$ V). Now, the sensor characteristic is illustrated by curve B and the TD sensor initial setting is completed.

The selected gain data is stored in memory, and V_{OUT} from the auto gain control circuit stays constant during the toner sensor detection cycle.

<Toner Supply Criteria>

At every copy cycle, toner density in the developer is detected once. The sensor output voltage (V_{TD}) during the detection cycle is compared with the toner supply level voltage (V_{REF}).

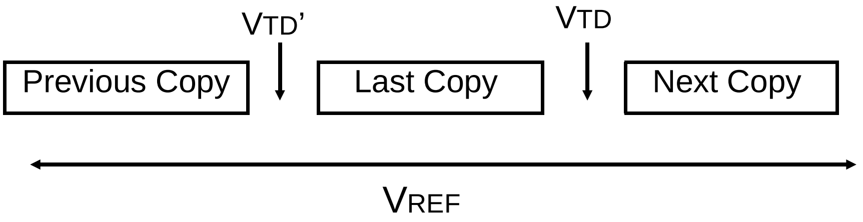


<Toner Supply Clutch on Time>

To stabilize toner concentration, toner supply amount (toner supply clutch on time) is controlled by referring to VREF and VTD.
The toner supply amount is calculated at every copy. The toner supply amount is determined by using the following factors.

① VREF – VTD

② VREF – VTD’ (VTD’ = VTD of the previous copy cycle)



By referring to these factors, the machine recognizes the difference between the current toner concentration and the target toner concentration. The machine also understands how much toner concentration has changed and predicts how much the toner supply amount will probably change.
By changing the toner supply amount precisely, toner concentration (image density) is kept at a constant level.
Since the toner supply clutch on time updating is under fuzzy control, the relation among VTD, VTD’, VREF cannot be expressed by a simple algebraic formula.

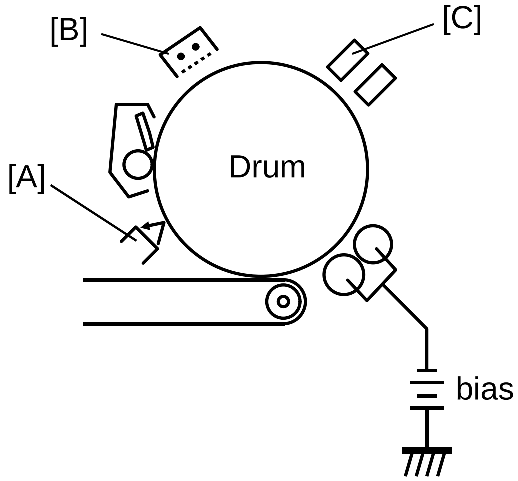
<VREF Correction>

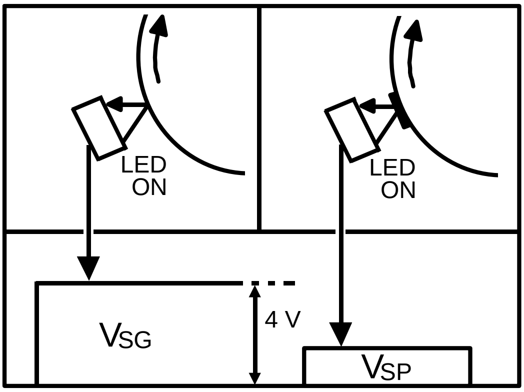
The image on the OPC drum changes due to variation of toner chargeability (influenced by the environment) even if the toner concentration is constant.
The image density sensor (ID sensor) directly checks the image on the OPC drum and shifts VREF data (under fuzzy control) to keep the image on the OPC drum constant, as explained in the next section.

NOTE: 1. Toner end condition is detected by the toner end sensor (see the development section for details).

2. The toner supply clutch turns on at the intervals between each copy process while image development is not performed.

1.4.2 Image Density Sensor Detection

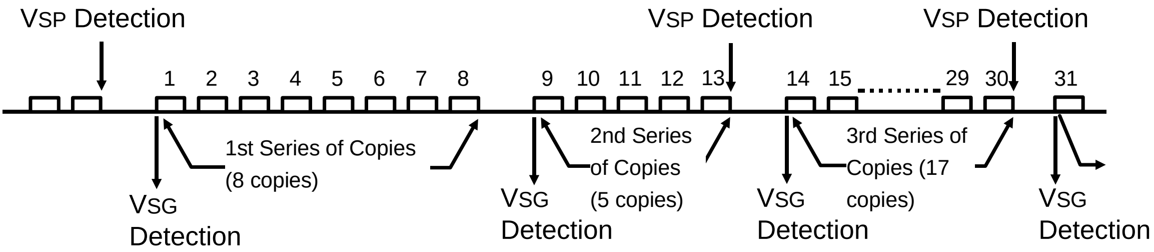

[B]
[C]
[A]
Drum
bias


LED ON
LED ON
VSG
4 V
VSP

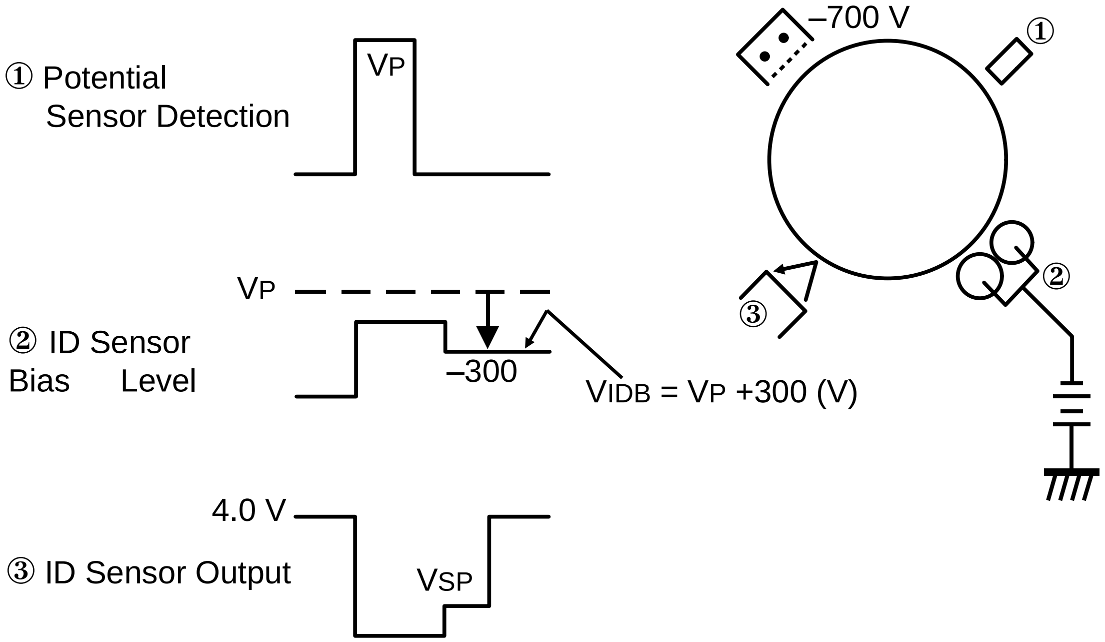
VSG and VSP are checked by the ID sensor [A]. The ID sensor is located underneath the drum cleaning section.
There is no ID sensor pattern in the optics, however, a pattern image is made on the OPC drum by the charge corona unit [B] and the erase lamp [C].

VSG is the ID sensor output when checking the erased drum surface.
VSP is the ID sensor output when checking the ID sensor pattern image.

To compensate for any variation in light intensity from the sensor LED, the reflectivity of both the erased drum surface and the pattern on the drum are checked.


VSP Detection
VSP Detection
VSP Detection
1 2 3 4 5 6 7 8
9 10 11 12 13
14 15
29 30
31
1st Series of Copies (8 copies)
2nd Series of Copies (5 copies)
3rd Series of Copies (17 copies)
VSG Detection
VSG Detection
VSG Detection
VSG Detection

VSG is detected every time the machine starts copying.
During VSG detection, the development sleeve rollers do not rotate and no development bias is applied.
VSP is detected after copying is completed if 10 or more copies have been made since VSP was last detected. Since the transfer belt must be released when checking VSP, a VSP check cannot be done during continuous copying.



While developing the ID sensor pattern, ID sensor bias is applied. ID sensor bias is determined during process control data initial setting as follows:

Apply charge while grid voltage is –700 V to create the ID sensor pattern.

Check the drum potential (VP) of the latent image created by the charge with –700 V grid.

Adjust the ID sensor bias (VIDB) so that it satisfies the following formula.

VIDB = VP – (–300) (V)
= VP + 300 (V)

Change the bias to the calculated VIDB and detect VSP. VSG detected during VSG adjustment sequence in the process control data initial setting and VSP are used to determine VREF data at process control data initial setting.
VIDB is not changed until the next process control data initial setting is done.

<VREF correction timing>

After the series of copies is completed in the case that 10 or more copies have been made, VREF is updated by referring to the previous VREF (VREF'), VSG, VSP and the current TD sensor output (VTD).

Since this VREF data updating is under fuzzy control, the relationship among VREF, VREF', VSG, VSP and VTD cannot be expressed by a simple algebraic formula.

VREF is updated not only at the above case. But also during developer initial setting and during process control data initial setting.

1.4.3 Sensor Abnormal Conditions

a. ID sensor (V_{SG},V_{SP}) abnormal

Whenever V_{SG} falls under 2.5 V or V_{SP} rises over 2.5 V, the CPU fixes the V_{REF} data and toner concentration is controlled only by using TD sensor output.

V_{SG} and V_{SP} are still detected as usual during abnormal conditions and if output returns to normal levels ($V_{SG} \geq 2.5$ V, $V_{SP} \leq 2.5$ V), the CPU returns the toner concentration control to normal mode.

b. TD sensor (V_{TD}) abnormal

Whenever V_{TD} rises over 4.0 V or V_{TD} falls under 0.5 V, the CPU shifts the toner supply to the fixed supply mode. In this condition, the CPU never stops the toner supply. The fixed toner supply amount can be changed in four steps (4%, 7%, 11%, 14%) by using SP mode. The default fixed toner supply amount is 4%.

V_{TD} is still detected as usual during the abnormal condition and if its output returns to a normal level, the CPU returns the toner concentration control to normal mode.

c. Drum Potential Sensor abnormal

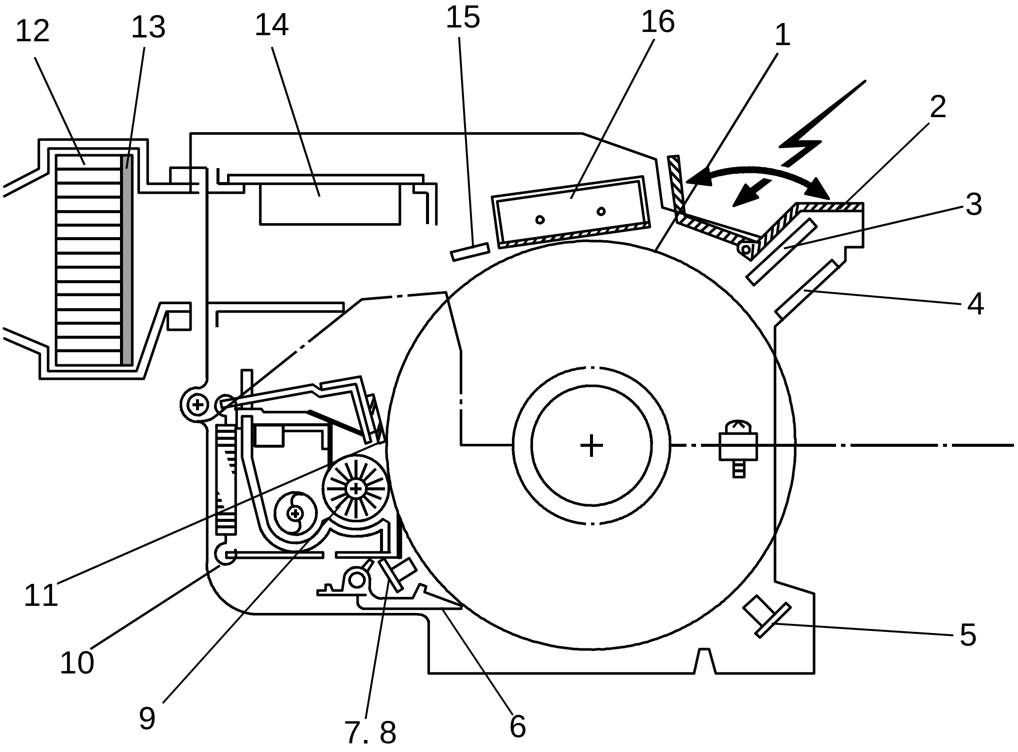
Whenever V_{100} rises over 1.6 V or V_{100} falls under 0.1 V or whenever V_{800} rises over 5.0 V or V_{800} falls under 2.7 V, the CPU also shifts the toner supply to the fixed supply mode, as for a TD sensor (V_{TD}) abnormal condition.

Related SC codes. (See troubleshooting section of details.):

Code	Condition
351	Abnormal V_{SG} Detection ($V_{SG} > 4.2$ V)
352	Incomplete TD Sensor Initial Setting
353	Abnormal V_{SP} Detection ($V_{SP} > 2.5$ V)
354	Abnormal V_{SG} Detection ($V_{SG} \leq 2.5$ V)
355	Abnormal V_{TD} Detection ($V_{TD} > 4$ V)
356	Abnormal V_{TD} Detection ($V_{TD} < 0.5$ V)
357	Abnormal V_{SP}/V_{SG} Detection ($V_{SP}/V_{SG} \geq 0.25$ V)
358	Abnormal V_{SP}/V_{SG} Detection ($V_{SP}/V_{SG} < 0.25$ V)
361	Incomplete Drum Potential Sensor Calibration

2. DRUM UNIT

2.1 OVERVIEW



The drum unit consists of the components as shown in the above illustration. An organic photoconductor drum (diameter: 100 mm) is used for this model.

1. OPC Drum	9. Cleaning Brush
2. OPC Drum Protective Shutter	10. Toner Collection Coil
3. Erase Lamp	11. Cleaning Blade
4. Drum Potential Sensor	12. Ozone Filter
5. Pre-transfer Lamp	13. Cleaning Filter
6. Pick-off Pawl	14. Charge Power Pack
7. Image Density Sensor	15. Quenching Lamp
8. Drum Thermistor	16. Main Charge Corona Unit

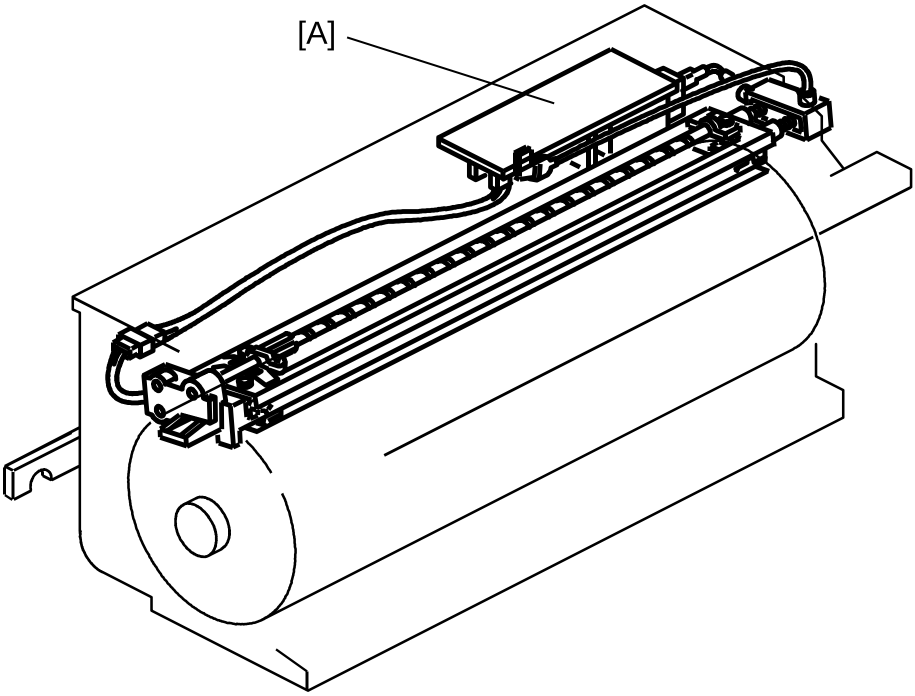
2.2 OPC DRUM CHARACTERISTICS

An OPC has the characteristics of:

1. Being able to accept a high negative electrical charge in the dark. (The electrical resistance of a photoconductor is high in the absence of light.)
2. Dissipating the electrical charge when exposed to light. (Exposure to light greatly increases the conductivity of a photoconductor.)
3. Dissipating an amount of charge in direct proportion to the intensity of the light. That is, where stronger light is directed to the photoconductor surface, a smaller voltage remains on the OPC.
4. Being less sensitive to changes in temperature (when compared to selenium F type drums).
5. Being less sensitive to changes in rest time (light fatigue). This makes it unnecessary to compensate development bias voltage for variations in rest time.

2.3 DRUM CHARGE

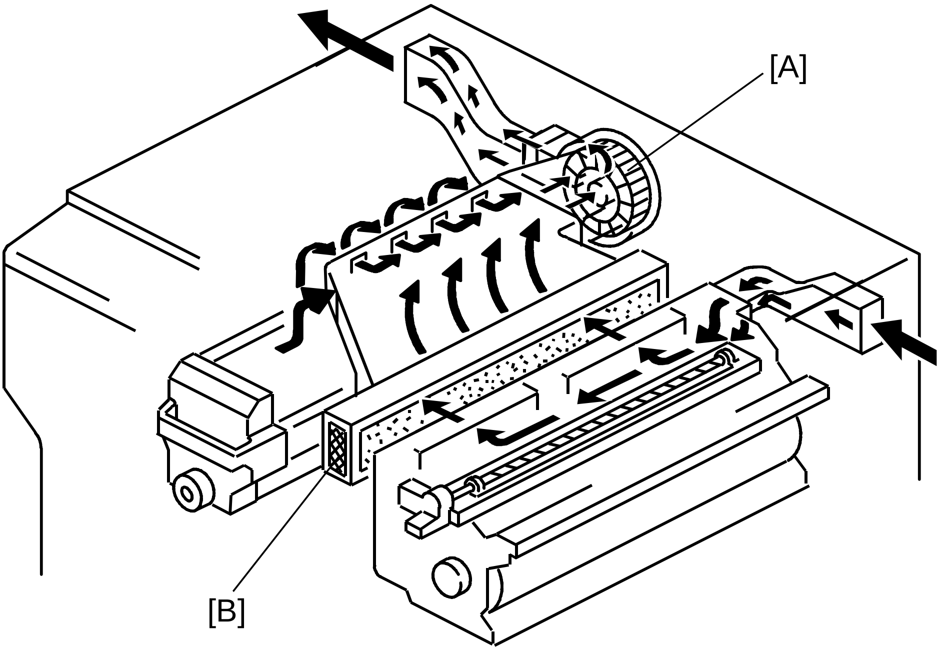
2.3.1 Overview



This copier uses a double corona wire scorotron system for drum charge. Two corona wires are required to give sufficient negative charge on the drum surface because of a rather high drum speed (330 mm/sec.). The stainless steel grid plate makes the corona charge uniform and controls the amount of negative charge on the drum surface by applying the negative grid bias voltage.

The charge power pack [A] gives a constant corona current to the corona wires (1100 µA) and bias voltage to the grid plate is automatically controlled to maintain proper image density according to the change of the OPC drum potential due to dirty grid plate and charge corona casing.

2.3.2 Air Flow Around the Drum

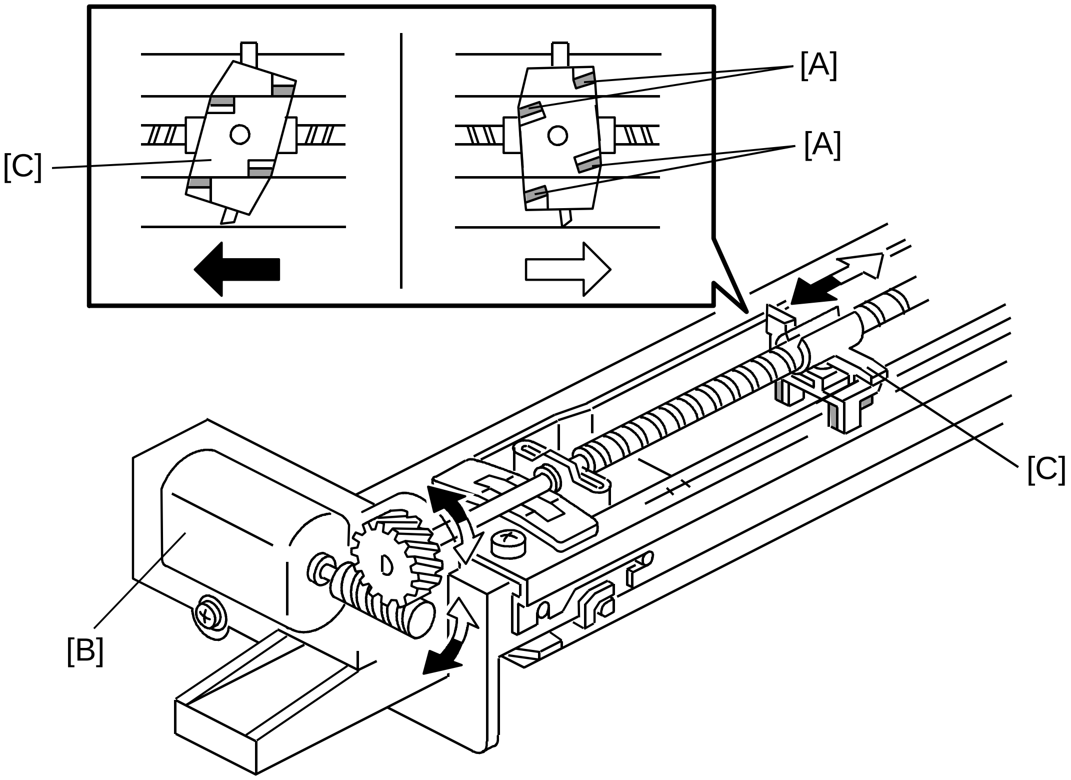


The exhaust fan [A] located above the fusing unit provides an air flow to the charge corona unit to prevent uneven built-up of negative ions that can cause an uneven charge of the drum surface as shown.

An ozone filter [B] absorbs the ozone (O_3) around the drum.

The exhaust fan rotates slowly during stand-by and rotates quickly during copying to keep the temperature inside the machine constant.

2.3.3 Charge Wire Cleaning Mechanism



The flow of air around the charge corona wire may deposit toner particles on the corona wires. These particles may interfere with charging and cause low density bands on copies.

The wire cleaner pads [A] automatically clean the wires to prevent such a problem.

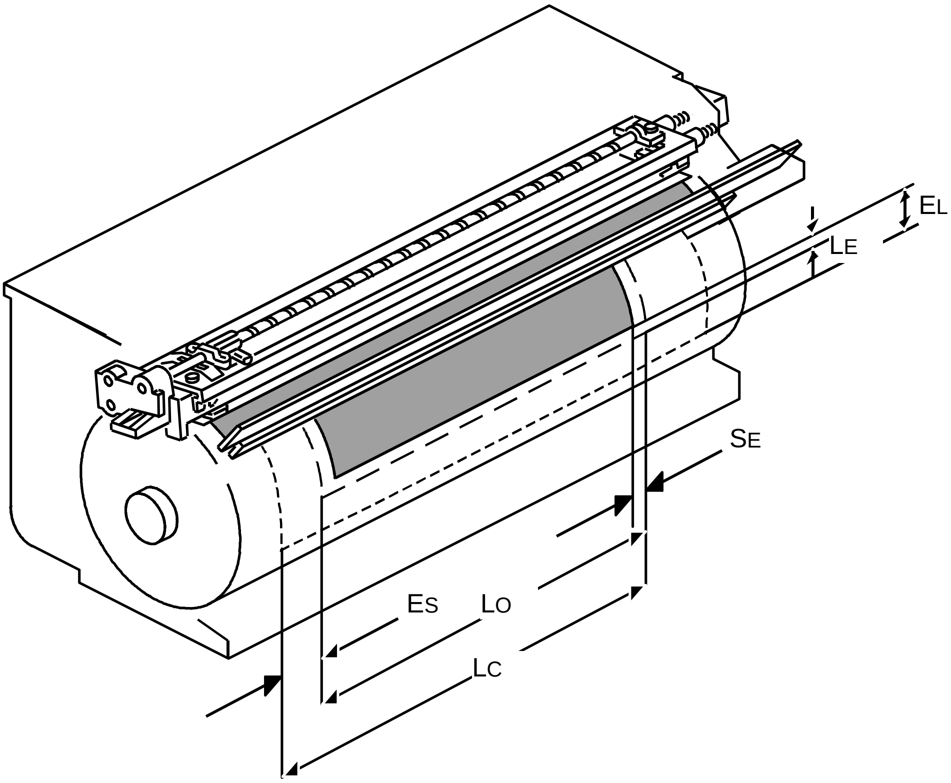
The wire cleaner is driven by a dc motor [B]. Normally the wire cleaner [C] is located at the front end position (home position). After 5000 or more copies are made and fusing temperature is less than 100°C after the main switch is turned on, the wire cleaner motor turns on to bring the wire cleaner to the rear end and then back to the home position.

When the wire cleaner moves from the rear to the home position (black arrow in the illustration), the wire cleaner pads clean the wires.

There are no home position and return position sensors. The CPU monitors the input voltage (5 V). When the wire cleaner reaches the end, it is stopped and the motor is locked. At this time, input voltage slightly decreases (to about 4 V) and the CPU judges to rotate the motor in reverse.

2.4 ERASE

2.4.1 Overview



LE: Lead edge erase margin 3.5 ± 2.5 mm
SE: Side erase margin total of both sides 3 mm or less
Lo: Original width
Lc: Charged width of drum
EL: Lead edge erase
Es: Side erase

The erase lamp unit consists of a line of 123 LEDs extending across the full width of the drum, the width of each being about 2.5 mm. In editing mode, the appropriate LED's turn on according to the customer's designation.

2.4.2 Lead Edge and Trail Edge Erase

The entire line of LEDs turns on when the main motor turns on. They stay on until the erase margin slightly overlaps the lead edge of the original image on the drum (lead edge erase margin). It prevents the shadow of the original lead edge from appearing on the copy paper. This lead erase margin is also necessary for the lead edge of the copy paper to separate from the hot roller. The width of the lead edge erase margin can be adjusted by SP mode (1 SP Adjustment mode: PAGE 3).

When the scanner reaches the return position, the charge corona, the grid bias, and the exposure lamp turn off. However, the charged area on the drum surface is a little longer than the actual original length in order to have the entire latent image of the original.
The entire line of LEDs turn on when the trail edge of the latent image has passed under the erase lamp unit. This prevents developing unnecessary parts of the drum surface, reducing toner consumption and drum cleaning load.
The LEDs stay on to erase the lead edge of the latent image in the next copy cycle. After the final copy, the erase lamps turn off at the same time as the main motor.

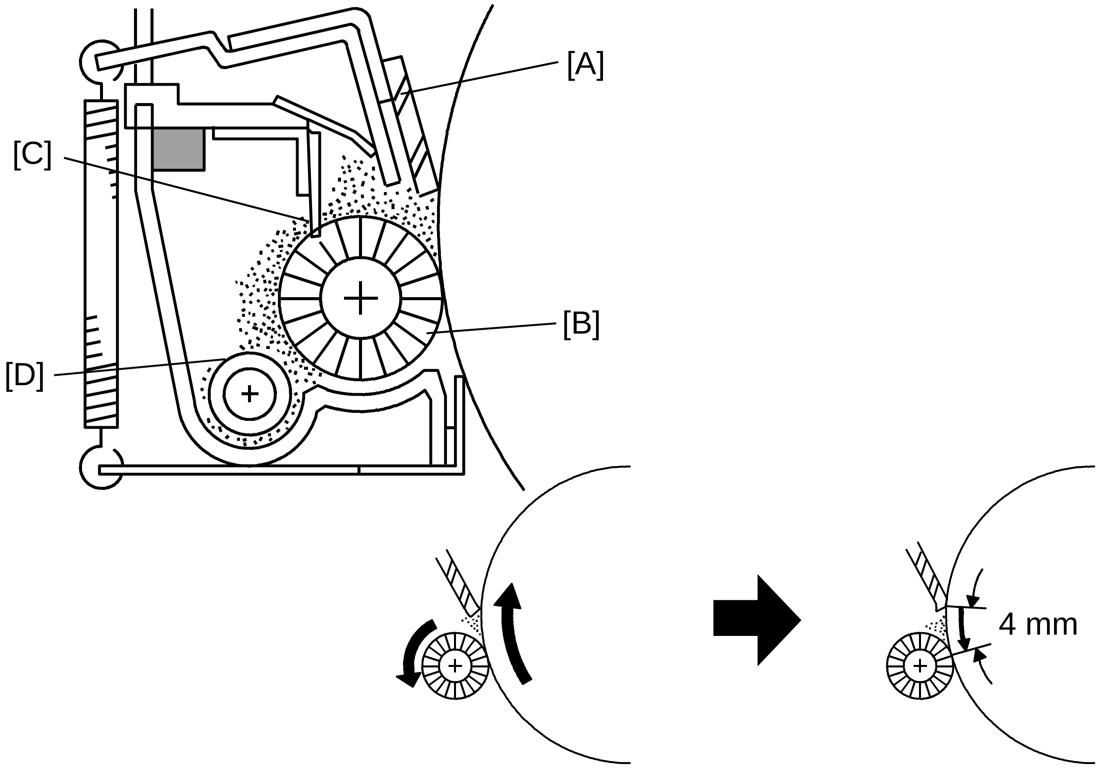
2.4.3 Side Erase

Based on the combination of copy paper size and the reproduction ratio data, the LEDs turn on in blocks. This prevents the shadow of the original side edge and unexposed front and rear sides of the drum surface in reduction mode from being developed. This reduces toner consumption and drum cleaning load.

In the DJF mode, the horizontal original standard position on the exposure glass is 5 mm away from the rear scale.
In the RDH mode, the horizontal center of the original is aligned with the center of the exposure glass.
On the other hand, the horizontal original standard position on the exposure glass in the platen cover mode is the rear scale edge.
To erase the shadow made by the edge of the rear scale in platen cover mode, one more LED at the front side turns on. This is in addition to the LED’s on in DJF and RDH modes.

2.5 CLEANING

2.5.1 Overview



This copier uses the counter blade system for drum cleaning.
The blade [A] is angled against drum rotation. This counter blade system has the following advantages:

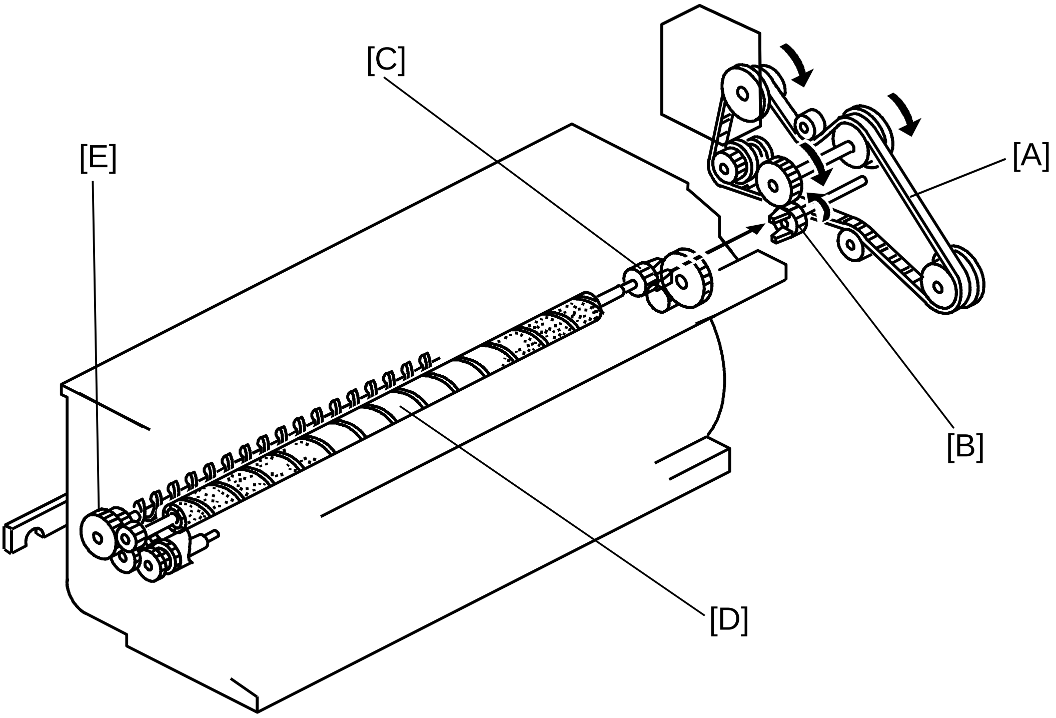
- Less wearing of the cleaning blade edge.
- High cleaning efficiency.

Due to the high efficiency of this cleaning system, the pre-cleaning corona and cleaning bias are not used for this copier.

The cleaning brush [B] is used to support the cleaning blade.
The brush collects toner from the drum surface and scraped by the cleaning blade. Toner on the cleaning brush is scraped off by the mylar [C] and falls to the toner collection coil [D]. Toner is transported to the toner collection bottle by the toner collection coil.

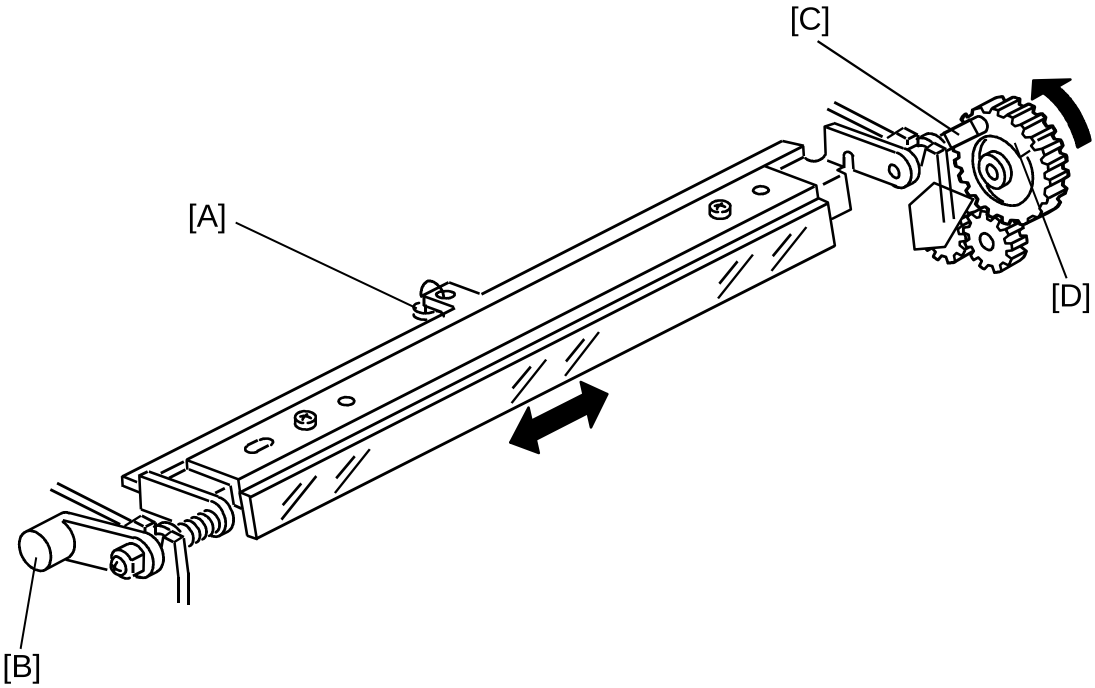
To remove the accumulated toner at the edge of the cleaning blade, the drum turns in reverse for about 4 mm at the end of every copy job. The accumulated toner is removed by the cleaning brush by this action.

2.5.2 Drive Mechanism



The drive force from the main motor is transmitted to the cleaning unit drive gear via the timing belt [A] and the cleaning unit coupling [B]. The cleaning unit drive gear [C] then transmits the force to the front side through the cleaning brush [D]. The force at the front side is used for the toner collection coil gear [E].

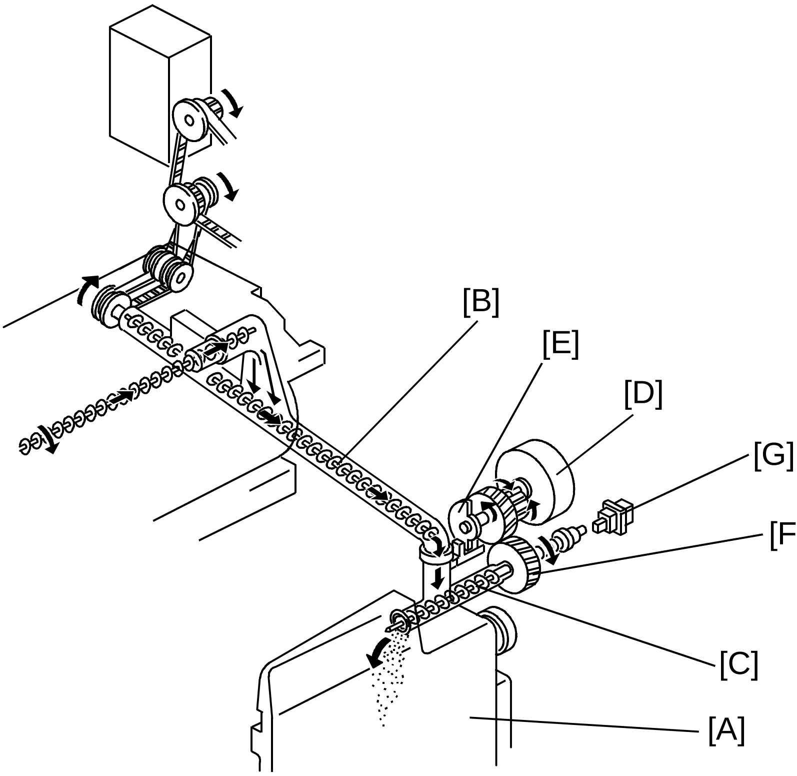
2.5.3 Cleaning Blade Pressure Mechanism and Side-to-Side Movement



The spring [A] always pushes the cleaning blade against the OPC drum. The cleaning blade pressure can be manually released by pushing up the release lever [B]. To prevent cleaning blade deformation during the transportation, the release lever is locked in the pressure release (upper) position.

The pin [C] at the rear end of the cleaning blade holder touches the cam gear [D] which gives a side-to-side movement to the blade. This movement helps to disperse accumulated toner to prevent early blade edge deterioration.

2.5.4 Toner Collection Mechanism



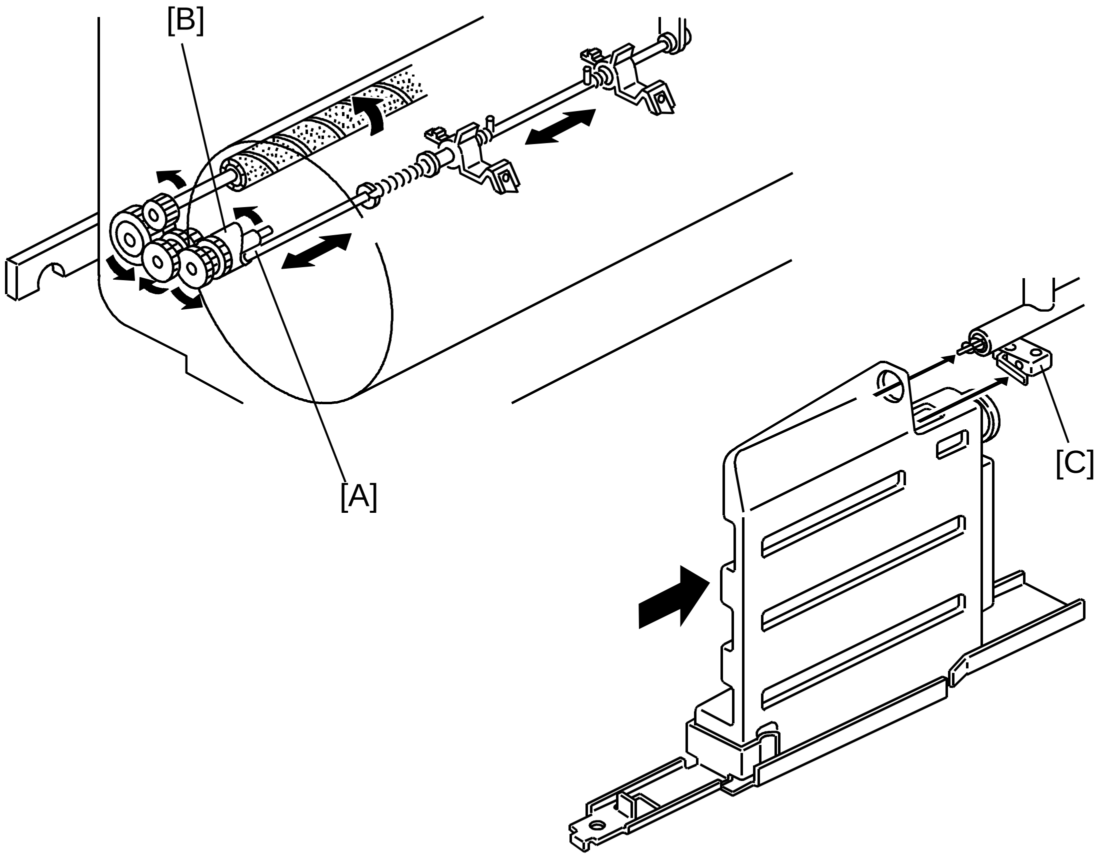
Toner collected by the cleaning unit is transported to the toner collection bottle [A] through the toner collection tubes. Three helical coils are used for toner transport.

One coil [B] is driven by the main motor via drive belts and the other coil [C] is driven by an independent toner collection drive motor [D].

The actuator disk [E] on the toner collection drive motor monitors the proper rotation of the toner collection coil [C] to prevent the coil from being damaged by toner clogged in the collection tube. The main PCB monitors the sensor output and increases the motor speed if the sensor monitors that the toner collection motor rotates at a speed lower than normal. Also, the CPU will display an SC 342 if no signal changes (ON → OFF) are detected for more than 2.55 seconds while the toner collection motor is turning.

When the toner collection bottle [A] become full, the toner pressure in the bottle increases and presses the gear [F] against the toner overflow switch [G]. After the toner overflow switch is activated, the finishing of the copy job, or up to 100 continuous copies, is allowed, then copying is prohibited and the service call "full toner collection bottle" indication is displayed on the LCD.

This condition can be cleared by de-actuating the toner overflow switch while de-actuating then actuating the toner collection bottle switch ([C] in next page).



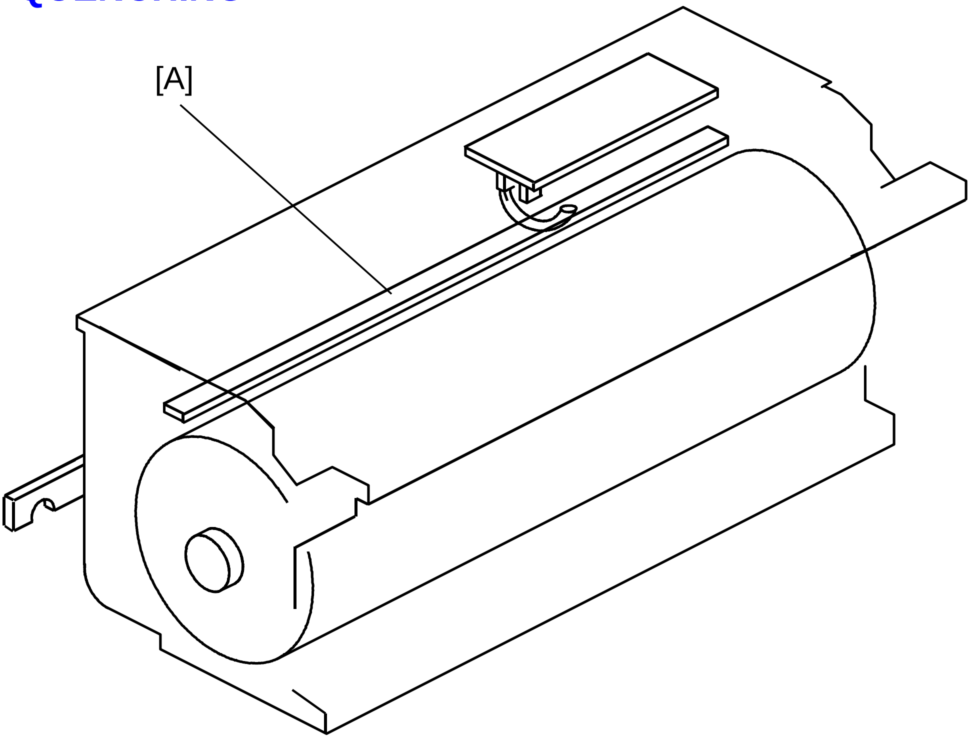
2.5.5 Pick-off mechanism

The pick-off pawls are always in contact with the drum surface with weak spring pressure. They move side to side during the copy cycle. This movement is made via a shaft [A] and an eccentric cam [B].

2.5.6 Toner Collection Bottle Set Detection

The toner collection bottle set switch [C] prohibits machine operation by indicating SC343 while the toner collection bottle is not set.

2.6 QUENCHING



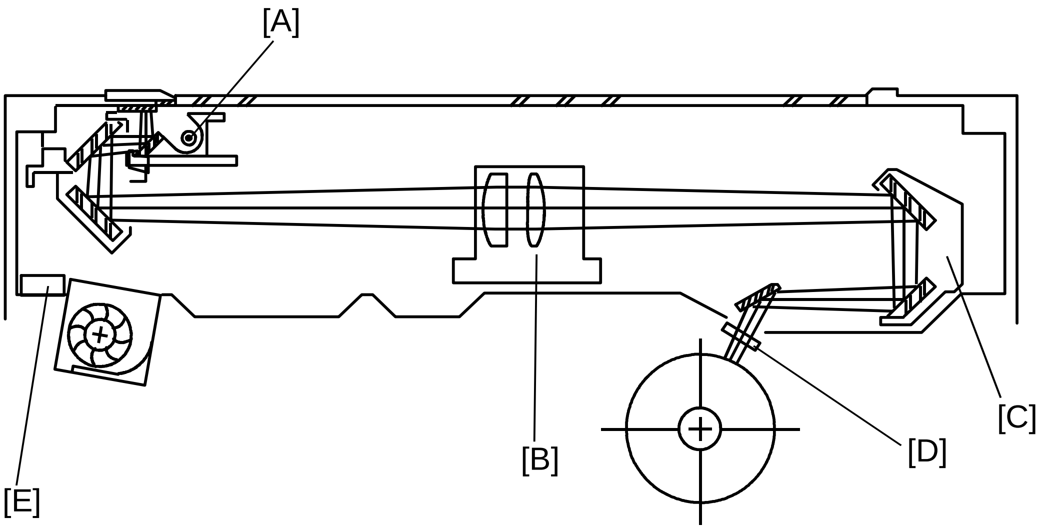
In preparation for the next copy cycle, light from the quenching lamp (QL) [A] neutralizes any charge remaining on the drum.

The quenching lamp consists of a line of 16 LEDs extending across the full width of the drum.

Yellow colored LEDs are used for QL to reduce ultra violet light which would cause light fatigue on the OPC drum.

3. OPTICS

3.1 OVERVIEW



The optics unit reflects an image of the original on the exposure glass onto the OPC drum. This forms a latent electrical image of the original.

On this model a halogen lamp (85 V 230 W) is used for the exposure lamp [A]. Lamp surface is frosted to ensure even exposure.

Six mirrors are used to make the optics unit smaller and obtain the wide reproduction ratio range (50 ~ 200%).

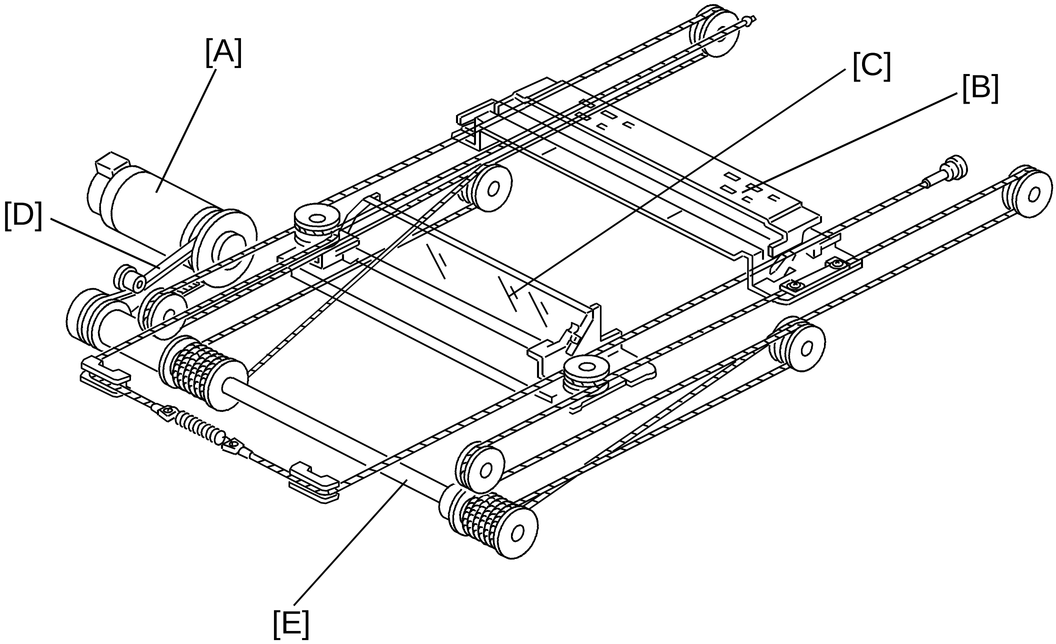
The lens [B] is driven by two stepping motors for (1) vertical direction (parallel to the paper feed direction) and (2) horizontal direction movements.

To correct focal length change in reduction and enlargement modes, the third scanner unit [C] (4th and 5th mirrors) position is changed by a stepping motor.

The toner shielding filter [D] is green (a green filter partly absorbs red light) to improve red original duplication.

The optic anti-condensation heater [E] (located on the optic base plate) turns on while main switch is turned off to prevent the moisture from forming on the optics.

3.2 SCANNER DRIVE

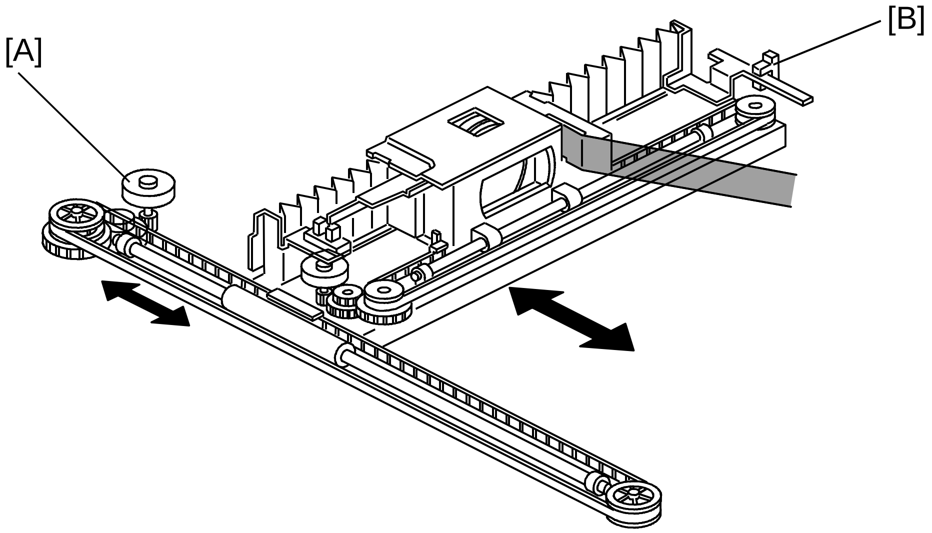


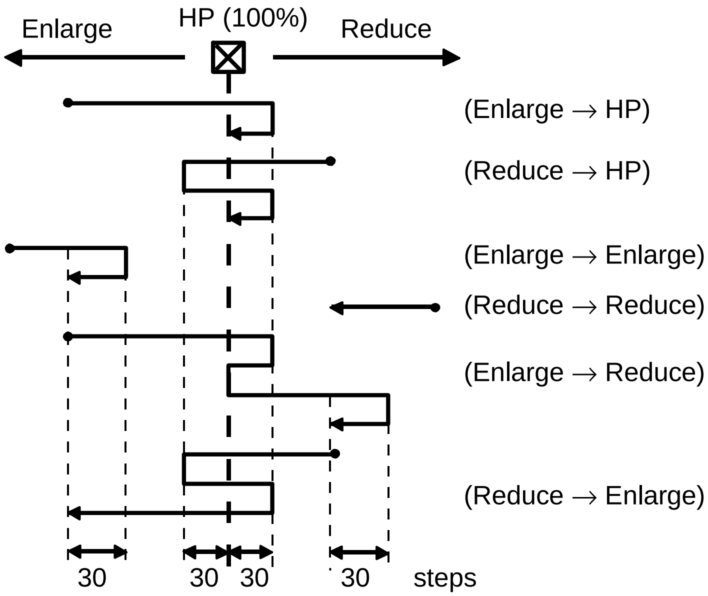
A dc servo motor is used as the scanner drive motor [A]. Scanner drive speed is 330 mm/sec. during scanning, and 1950 mm/sec. when the scanner goes back.

The scanner drive motor drives the first [B] and second scanners [C] using two scanner drive wires via the timing belt [D] and the scanner drive shaft [E]. The second scanner speed is half of the first scanner speed.

The scanner drive wire is not directly wound around the pulley on the scanner drive motor.

3.3 VERTICAL LENS DRIVE



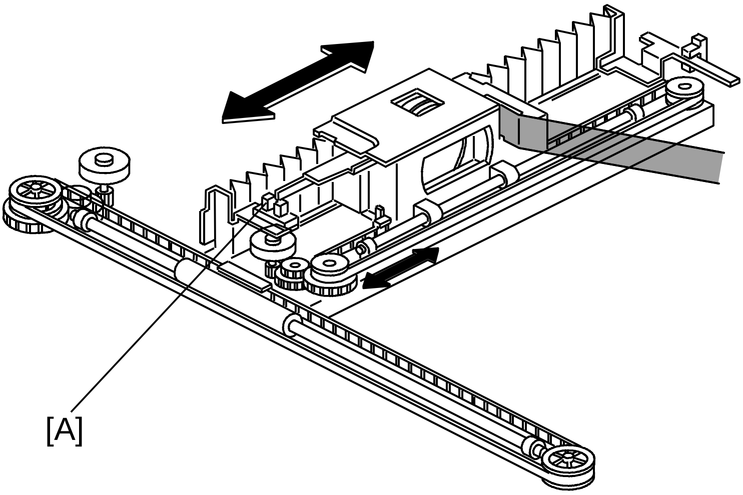

Enlarge
HP (100%)
Reduce
(Enlarge → HP)
(Reduce → HP)
(Enlarge → Enlarge)
(Reduce → Reduce)
(Enlarge → Reduce)
(Reduce → Enlarge)
30
30
30
30
steps

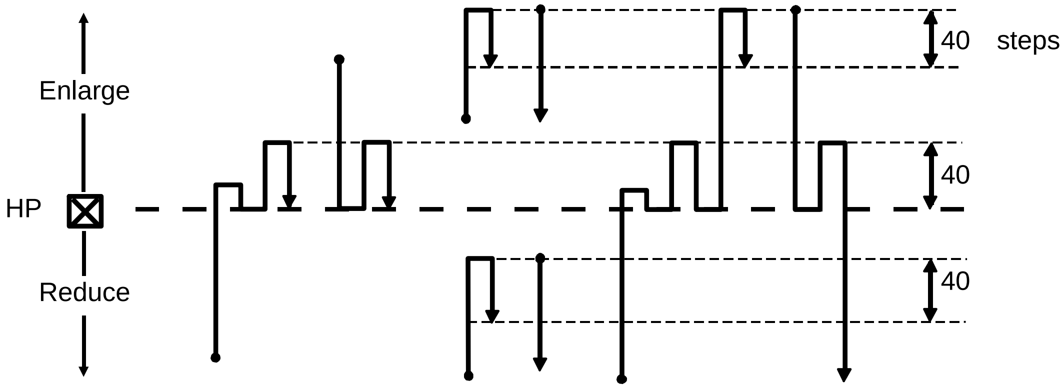
The lens vertical drive motor [A] changes the lens vertical position in accordance with the selected reproduction ratio.

A stepping motor (approx. 0.095 mm/step) is used to drive the lens through the lens drive belt. The maximum lens vertical shift distance is 290 mm (from the position at 50% to the position at 200%).

The lens vertical home position sensor [B] detects the lens vertical position for full size mode. The optic control PCB keeps track of the lens position based on the number of pulses sent to the lens vertical drive motor.

3.4 HORIZONTAL LENS DRIVE





The original horizontal position on the exposure glass varies depending on the mode (such as platen, DJF and RDH modes) for easy original handling. However, the center is the standard position for paper feed.

Therefore, the lens horizontal position has to be changed according to paper size, reproduction ratio, original feed modes and the edit modes (centering, margin adjust, etc.).

A stepping motor (approx. 0.07 mm/step) is used to drive the lens through the lens drive belt.

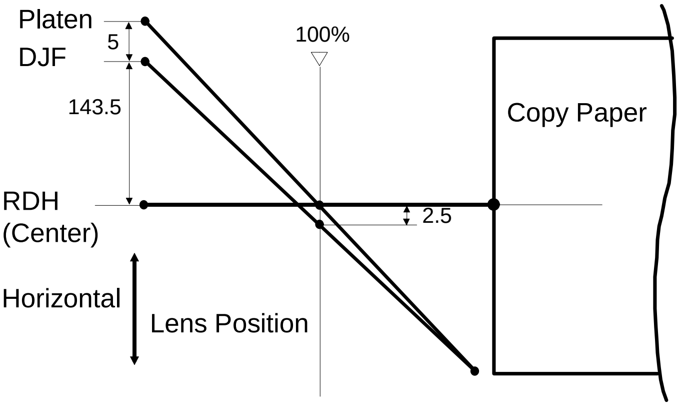
The lens horizontal home position sensor [A] is used to detect the lens horizontal position for A4/LT sideways, in full size and platen mode.

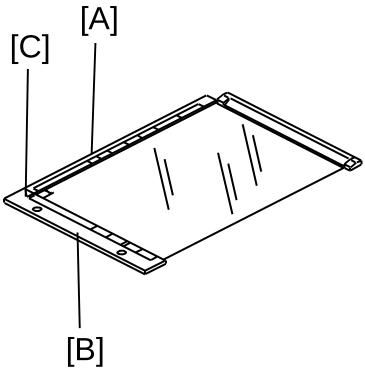
The other positions are determined by counting the number of motor drive pulses.

Since this model has a horizontal lens drive mechanism, side-to-side registration adjustment for each feed station can be done easily by using SP mode (1 SP Adjustment mode: PAGE 4).

3.5 HORIZONTAL LENS POSITIONING

3.5.1 For Original Position


Platen
5
DJF
143.5
RDH
(Center)
100%
2.5
Copy Paper
Horizontal
Lens Position



There are three standard original positions for the platen, DJF and RDH modes.

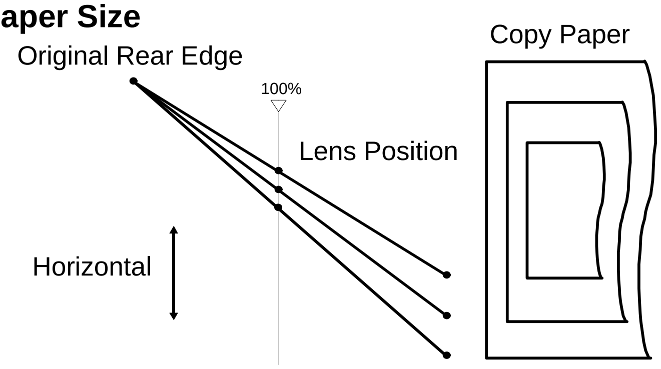
In platen mode, the original is aligned with both the rear [A] and the left [B] original scales (rear left corner [C] is the standard position).

In RDH mode, the original position is the center of the left scale [B].

In DJF mode, the original position is 5 mm to front of the platen mode original position to maintain the original transport path (5 mm from the rear scale).

The above figure shows the lens horizontal positions for each original mode when identical size paper is used.

3.5.2 For Paper Size

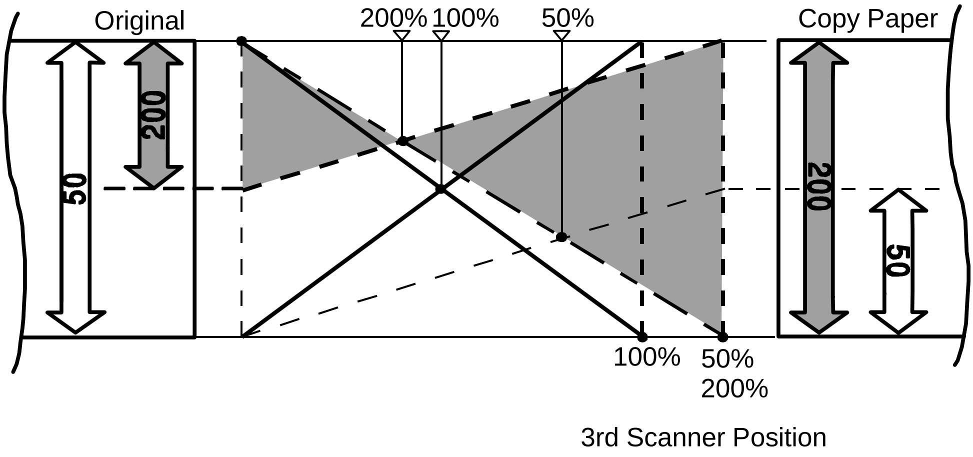

Copy Paper
Original Rear Edge
100%
Lens Position
Horizontal

To keep high paper feed performance, the center is assigned as the paper feed standard position. Therefore, the lens horizontal position is changed according to the paper size.

The figure shows the lens horizontal position for each paper size in full size mode.

3.5.3 For Reproduction Ratio

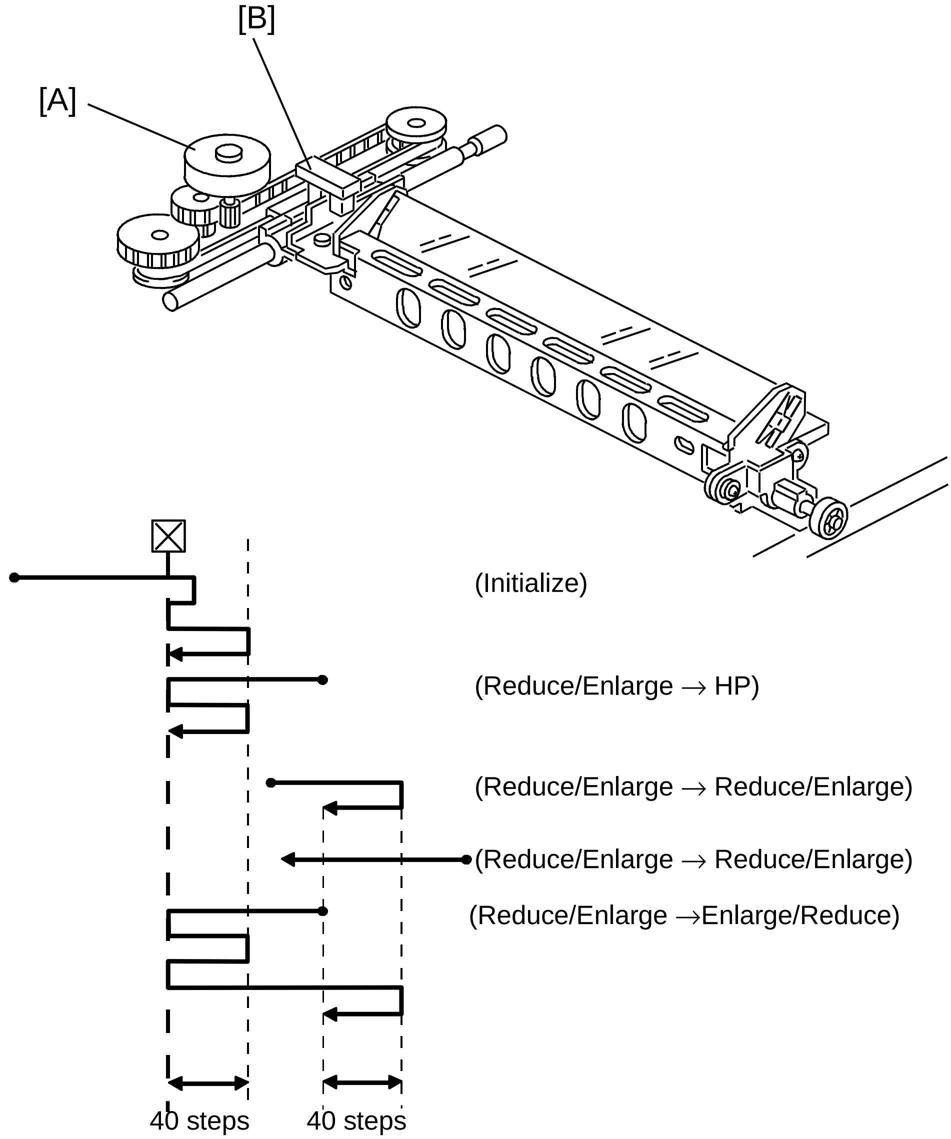
Original Rear Edge


Original
200% 100% 50%
Copy Paper
200
50
200
50
100%
50%
200%
3rd Scanner Position

When the reproduction ratio is changed, the vertical position of the lens is changed. At the same time, the total focal length has to be changed to adjust the image focusing. For this focal length change, the horizontal position of the 3rd scanner is also adjusted. The maximum 3rd mirror shift distance is 50 mm (from the position at 100% to the position at 50, 200%).

The figure shows the lens horizontal position for 50, 100 and 200%.

3.6 3RD SCANNER DRIVE

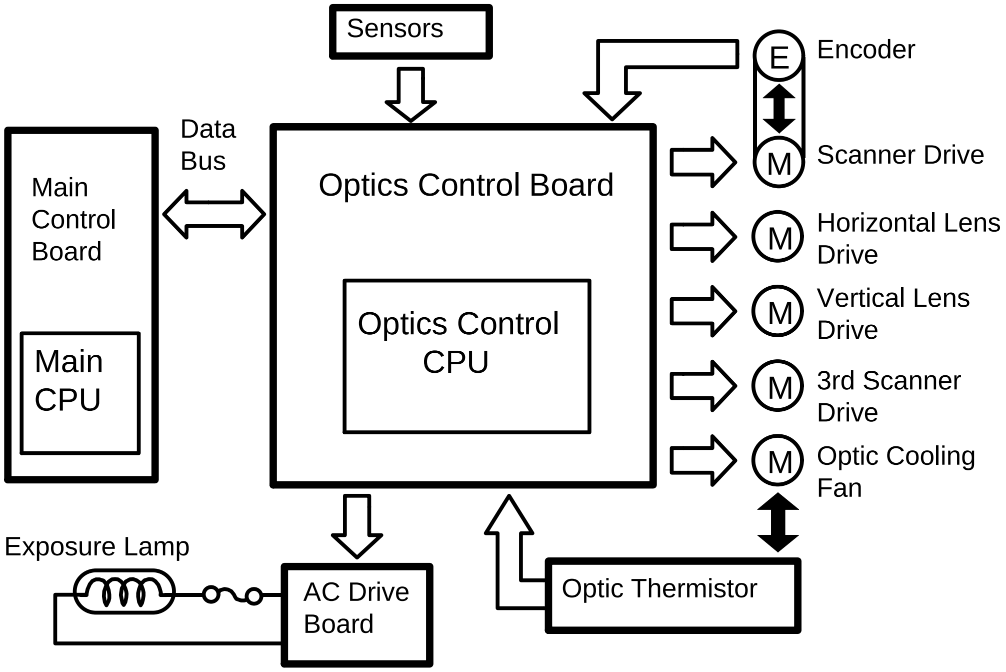

[B]
[A]
(Initialize)
(Reduce/Enlarge → HP)
(Reduce/Enlarge → Reduce/Enlarge)
(Reduce/Enlarge → Reduce/Enlarge)
(Reduce/Enlarge →Enlarge/Reduce)
40 steps
40 steps

To compensate the focus for reproduction and lens position changes, the 3rd scanner (4th and 5th mirrors) position is changed.

A stepping motor [A] (approx. 0.095 mm/step) is used for the 3rd scanner drive.

The 3rd scanner home position sensor [B] is used to detect the unit position for full size mode. The optic control PCB keeps track of the unit position based on the number of motor drive pulses.

3.7 OPTICS CONTROL CIRCUIT


Sensors
Encoder
Scanner Drive
Data Bus
Main Control Board
Main CPU
Optics Control Board
Optics Control CPU
Horizontal Lens Drive
Vertical Lens Drive
3rd Scanner Drive
Optic Cooling Fan
Exposure Lamp
AC Drive Board
Optic Thermistor
E
M

The optic control board communicates with the main board through a data bus. The optics control board monitors all the sensor signals, encoder output, thermistor output and controls all motors in the optics.

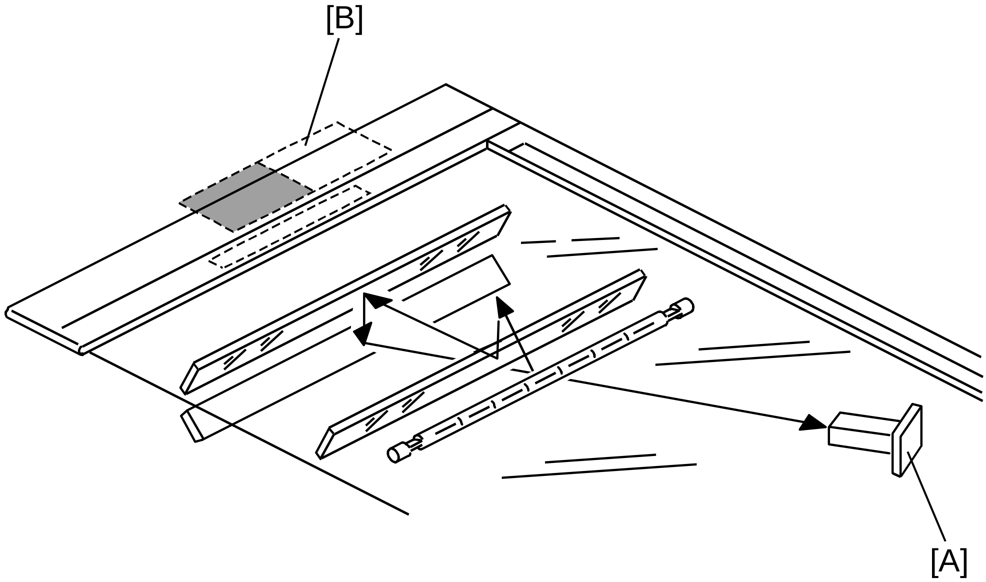
At the programmed time, the main CPU sends a scanner start signal to the optics control CPU.

The CPU generates a pulse-width modulation (PWM) signal. The PWM signal goes to a driver circuit, which sends drive pulses to the scanner drive motor.

An encoder in the scanner drive motor generates pulse signals.
A speed/direction control circuit monitors the scanner speed and the direction of the signals, and uses this data to regulate the motor speed.

The home position sensor monitors the position of the scanner. When the main switch is turned on, the main CPU confirms the position of the scanner by moving the scanner out of the home position and back again. This data is sent to the optics control CPU.

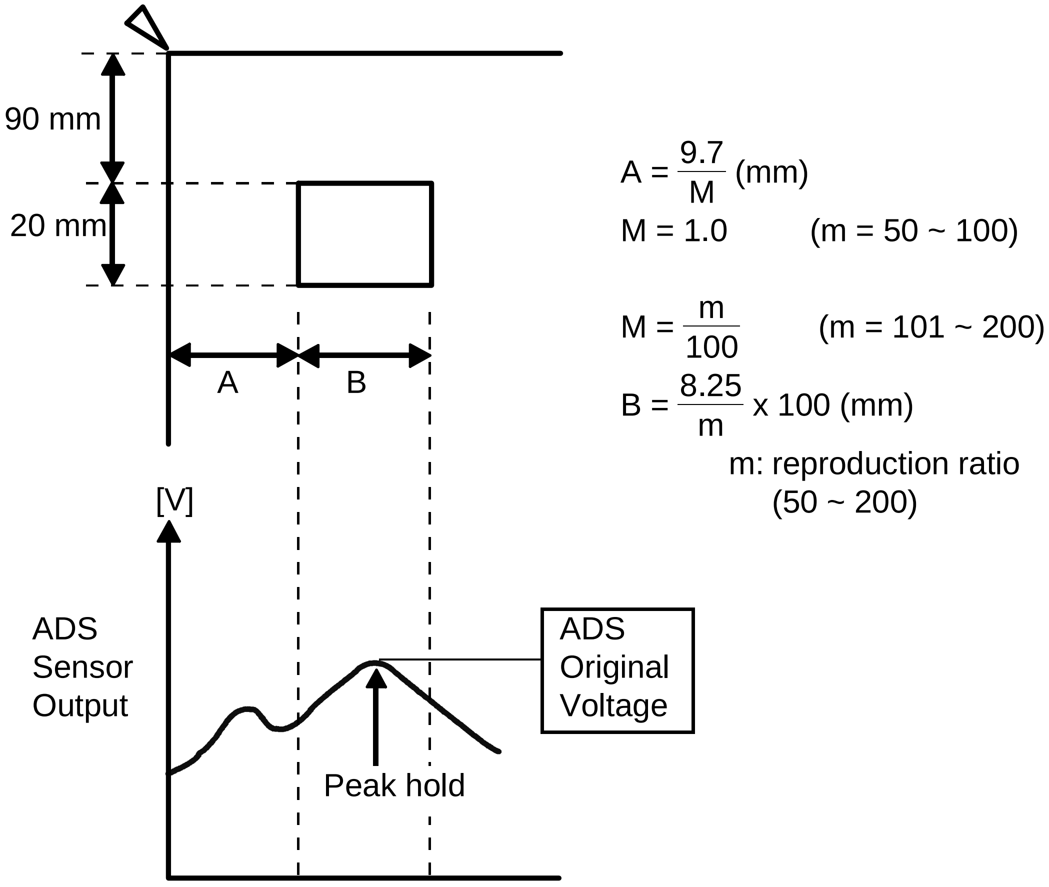
3.8 AUTOMATIC IMAGE DENSITY CONTROL SYSTEM (ADS)



In ADS mode the original background density is sensed by the ADS sensor [A] and the main CPU determines an appropriate development bias voltage for the original to prevent dirty backgrounds from appearing on copies.

The ADS sensor board is mounted on the rear side of the optics side plate. The sensor board is covered by the sensor housing cover which has a small hole to direct the reflected light from the original to the ADS sensor.

The ADS sensor standard voltage is adjusted to 2.7 V when process control data initial setting is performed. The exposure lamp turns on with ID level 4 at the home position and the light reflected by the ADS pattern [B] (white painted) reaches the ADS sensor. The main CPU adjusts the ADS gain data automatically to make the output 2.7 V. This gain data is stored in the RAM board.



$$A = \frac{9.7}{M} \text{ (mm)}$$

$$M = 1.0 \qquad (m = 50 \sim 100)$$

$$M = \frac{m}{100} \qquad (m = 101 \sim 200)$$

$$B = \frac{8.25}{m} \times 100 \text{ (mm)}$$

m: reproduction ratio
(50 ~ 200)

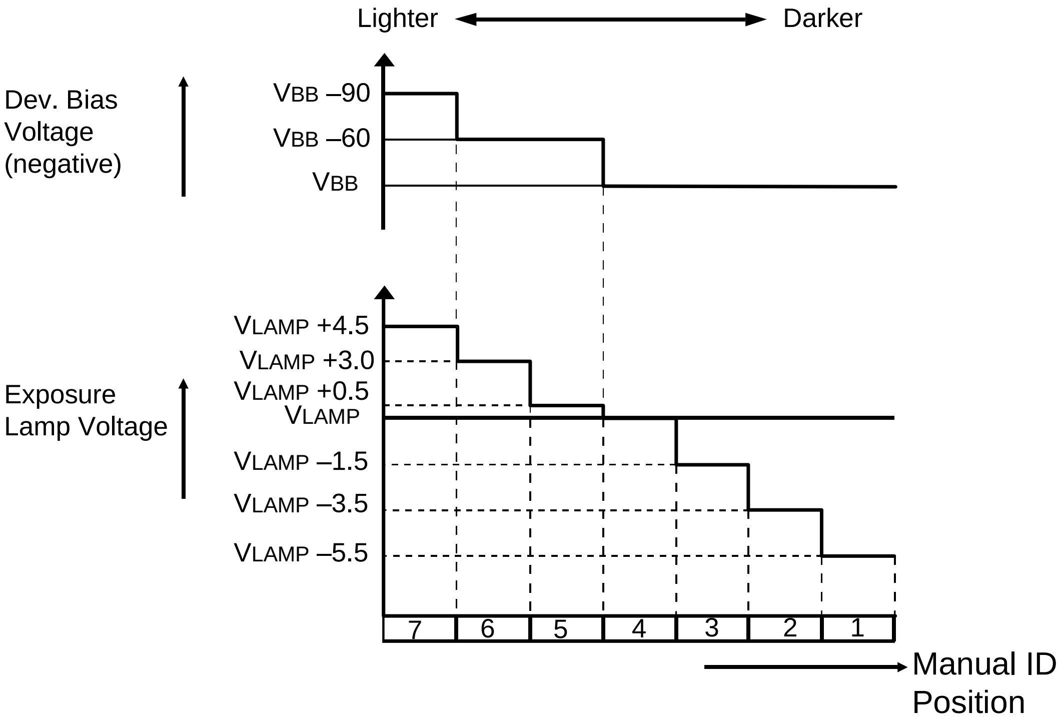
For the first scanning of an original in ADS mode, the CPU starts sampling of the ADS sensor output while exposing the ADS pattern at the scanner home position. Then the CPU stores the maximum ADS sensor output as a reference voltage. This means that every ADS check cycle, the first scanning for the original, the ADS reference voltage is renewed by the latest exposure light reflected by the ADS pattern.

In the full size mode, the CPU samples the ADS sensor output when the scanner scans the original from 9.7 mm to 18 mm from the left scale edge. The CPU takes the maximum ADS sensor output during the sampling period and compares it with the ADS reference voltage to determine the proper development bias voltage. (See development bias control section for details.)

The sampling length of ADS sensor output for the original differs depending on the reproduction ratio because the scanner speed is different.

3.9 MANUAL IMAGE DENSITY CONTROL

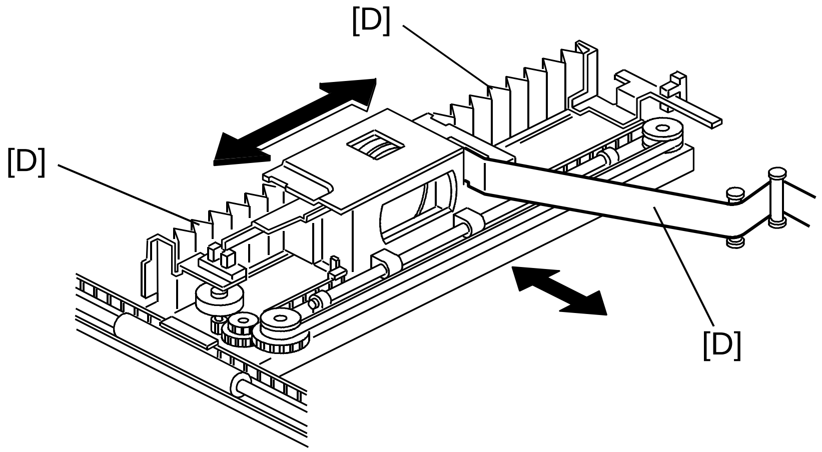
When the image density is set manually, the voltage applied to the exposure lamp changes as shown in the table below.

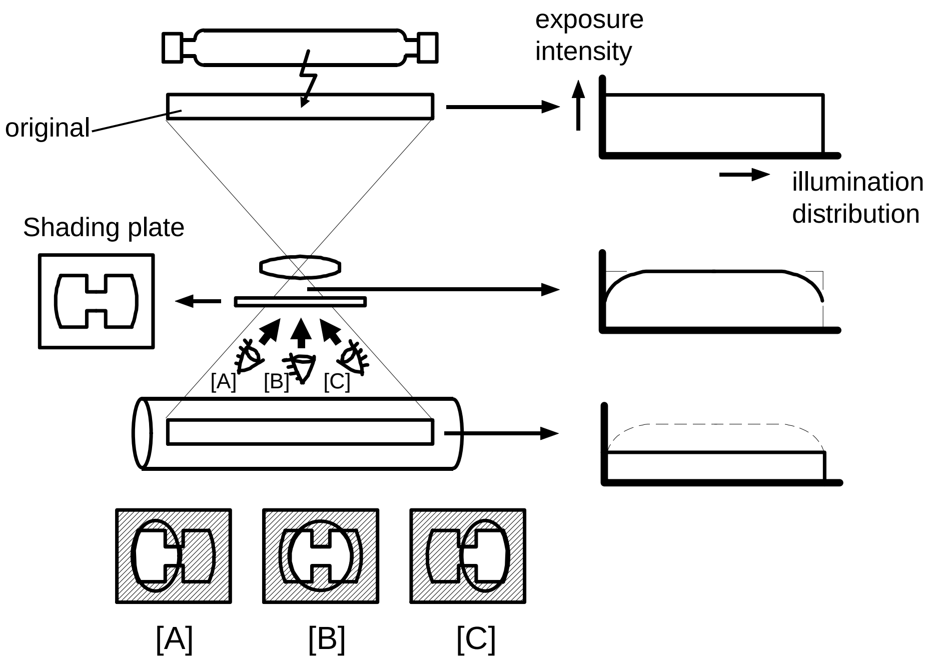


VLAMP: Exposure lamp voltage at ID level 4.
This value is determined at process control data initial setting.

VBB: Development bias (negative) voltage at ID level 4.
This value is determined at process control data initial setting.

3.10 UNEVEN LIGHT INTENSITY CORRECTION



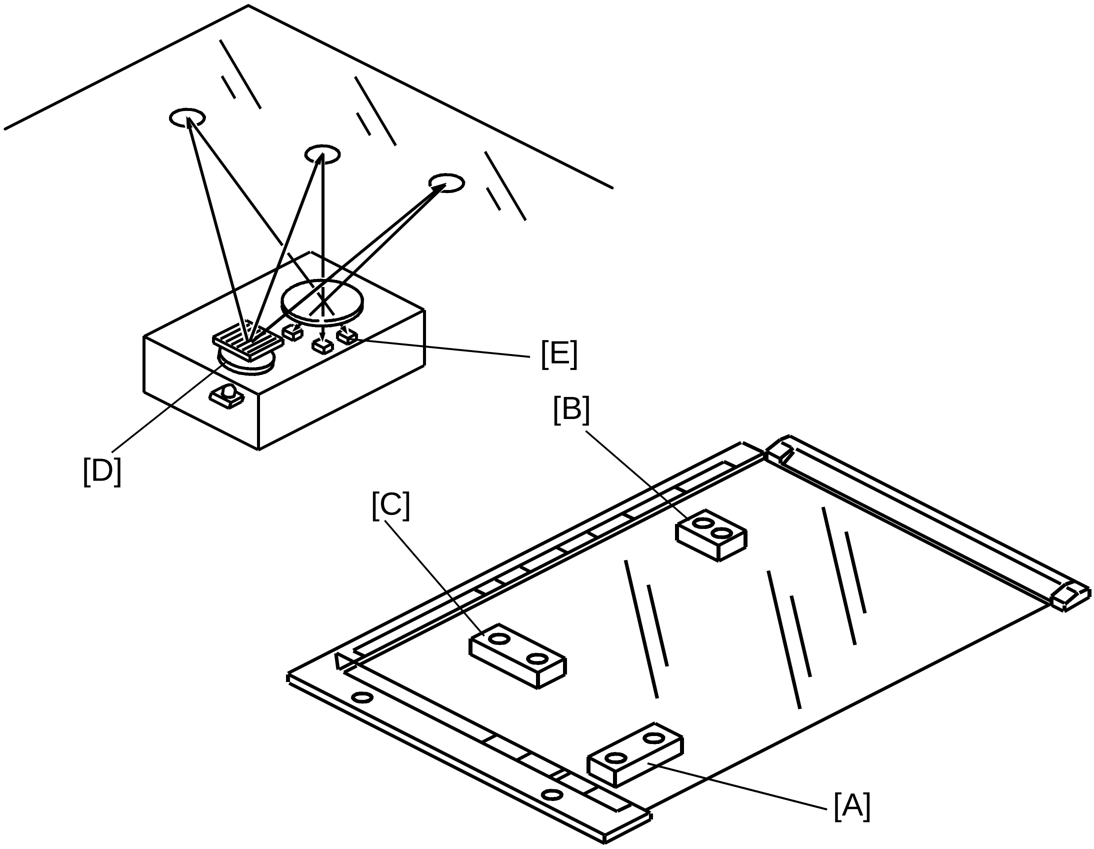

exposure intensity
original
illumination distribution
Shading plate
[A]
[B]
[C]
[A]
[B]
[C]

The entire exposure lamp surface is frosted to ensure even exposure.

To compensate for reduced light at the edge of the lens, a shading plate is placed in front of the lens. The shading plate is fixed to the lens unit.
The shading plate compensates the light intensity when the lens horizontal position is shifted ([A] to [C]).

Also three shading mylars [D] intercept any diffused reflected light from outside the light path.

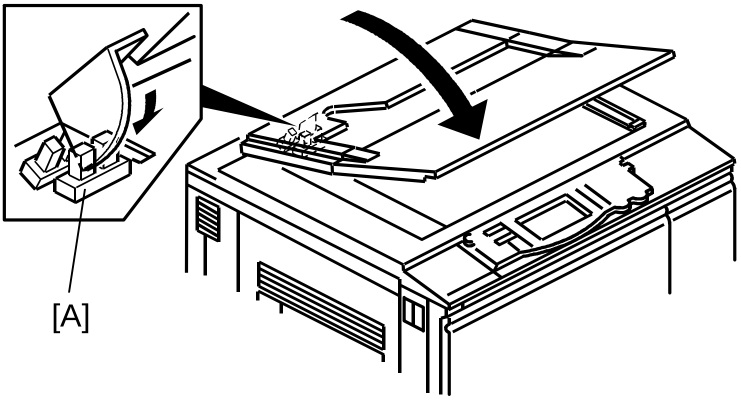
3.11 ORIGINAL SIZE DETECTION IN PLATEN MODE



There are three reflective sensors (APS sensors) in the optics cavity for the original size detection. Original width Sensor [A] is used for sensing the original width and Original Length Sensor-1 [B] and Original Length Sensor-2 [C] sense the original length.

Inside each APS sensor, there is an LED [D] and three photoelectric devices [E]. The light generated by the LED is broken up in three beams and each beam scans a different point of the exposure glass. If the original or platen cover is present over the scanning point, the beam is reflected and each reflected beam exposes a photoelectric device and activates it.

While the main switch is on, these sensors are active and the original size data is always sent to the main CPU. However, the main CPU checks the data only when the platen cover is opened.



Original Size		Length Sensor 1			Length Sensor 2			Width Sensor		
A4/A3 version	LT/DLT version	1	2	3	4	5	6	7	8	9
A3	11 x 7	O	O	O	O	O	O	O	O	O
B4	10 x 14	X	O	O	O	O	O	O	O	O
—	81/2 x 14	X	O	O	–	O	–	O	O	X
F4	8 x 13	X	X	O	O	O	O	O	O	X
A4–L	81/2 x 11	X	X	X	O	O	O	O	O	X
B5–L	—	X	X	X	O	O	O	O	X	X
A5–L	51/2 x 81/2	X	X	X	O	O	O	X	X	X
B6–L	—	X	X	X	X	O	O	X	X	X
A6–L	—	X	X	X	X	X	O	X	X	X
A4–S	11 x 81/2	X	X	X	O	O	O	O	O	O
B5–S	—	X	X	X	X	O	O	O	O	O
A5–S	81/2 x 51/2	X	X	X	X	X	O	O	X	X
A6–S	—	X	X	X	X	X	X	X	X	X

NOTE: –L: Lengthwise
–S: Sideways
Sensors #4 and #6 are not used for LT/DLT version machines.

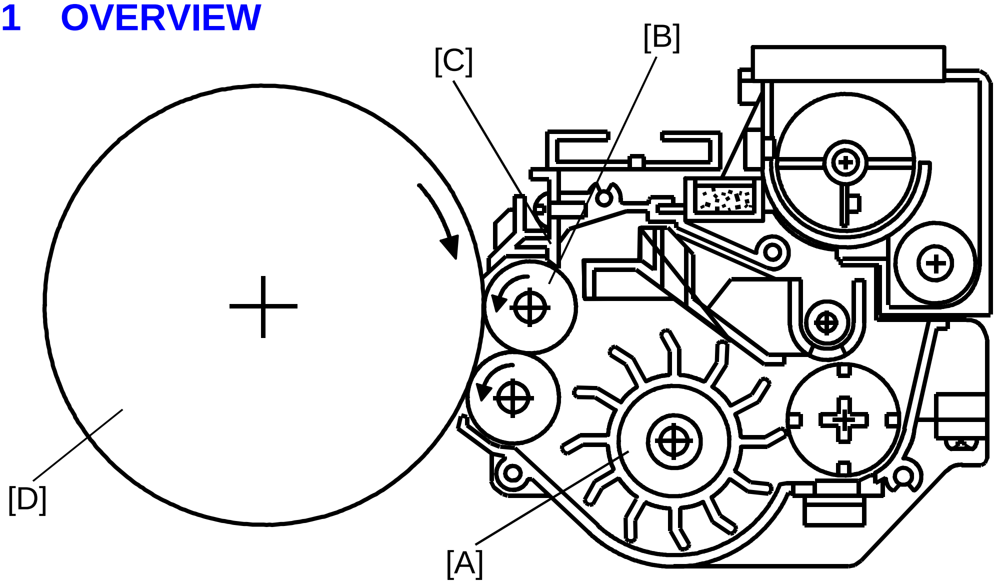
The check is done when the platen position sensor [A] turns on. This is when the platen is positioned about 15 cm above the exposure glass. At this time, only the sensor(s) located underneath the original receive the reflected light and are on. Other sensor(s) are off. Through the on/off data of the nine (seven for LT/DLT version machine) sensors, the main CPU can recognize the original size.

In case the copy is made with the platen open, the main CPU decides the original size only through the data when the Print key is pressed.

This original size detection method eliminates the necessity for a pre-scan and increases the machine’s productivity.

4. DEVELOPMENT

4.1 OVERVIEW



This copier uses a double roller (diameter 20 mm each) development (DRD) system. This system differs from single roller development systems in that (1) it develops the image in a narrower area, (2) it develops the image twice, and (3) the relative speed of each development roller against the drum is reduced. Also, finer toner (Approx. 9 µm) and developer (Approx. 70 µm) are used. Both the DRD system and new supplies improve the image quality, especially of thin horizontal lines, the trailing edges of the half-tone areas, and black cross points.

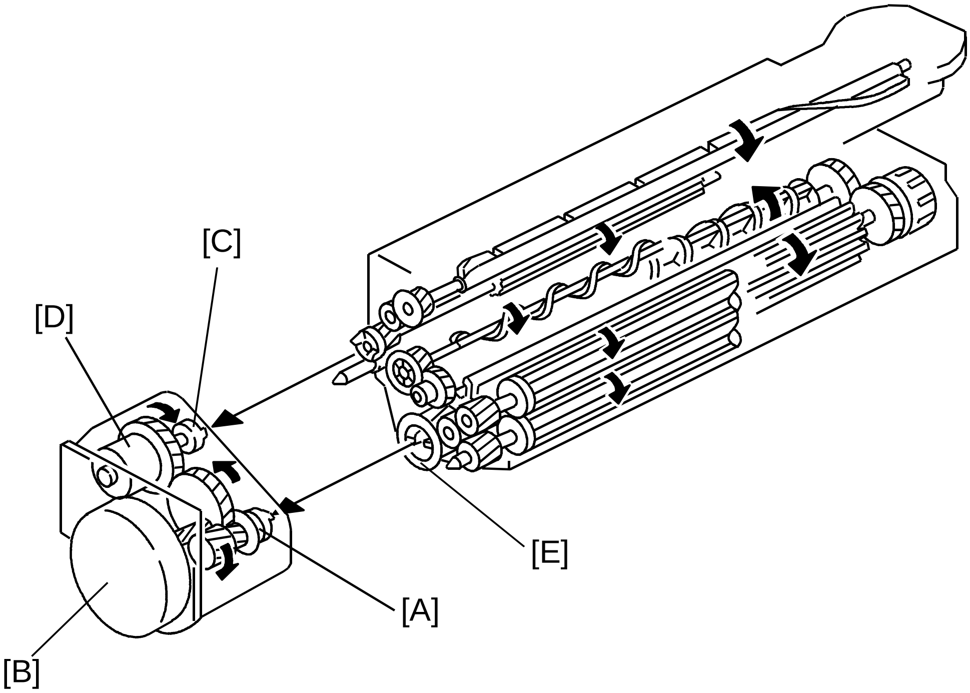
The paddle roller [A] picks up developer in its paddles and transports it to the upper development roller [B]. Internal permanent magnets in the development rollers attract the developer to the development roller sleeve. The upper development roller carries the developer past the doctor blade [C]. The doctor blade trims the developer to the desired thickness and creates backspill to the cross mixing mechanism.

The development rollers continues to turn, carrying the developer to the OPC drum [D]. When the developer brush contacts the drum surface, the negatively charged areas of the drum surface attract and hold the positively charged toner. In this way, the latent image is developed.

The development roller is given a negative bias to prevent the toner form being attracted to the non-image areas on the drum surface that may have a slight residual negative charge.

After turning another 100 degrees, the developer is returned to the paddle roller [A].

4.2 DRIVE MECHANISM

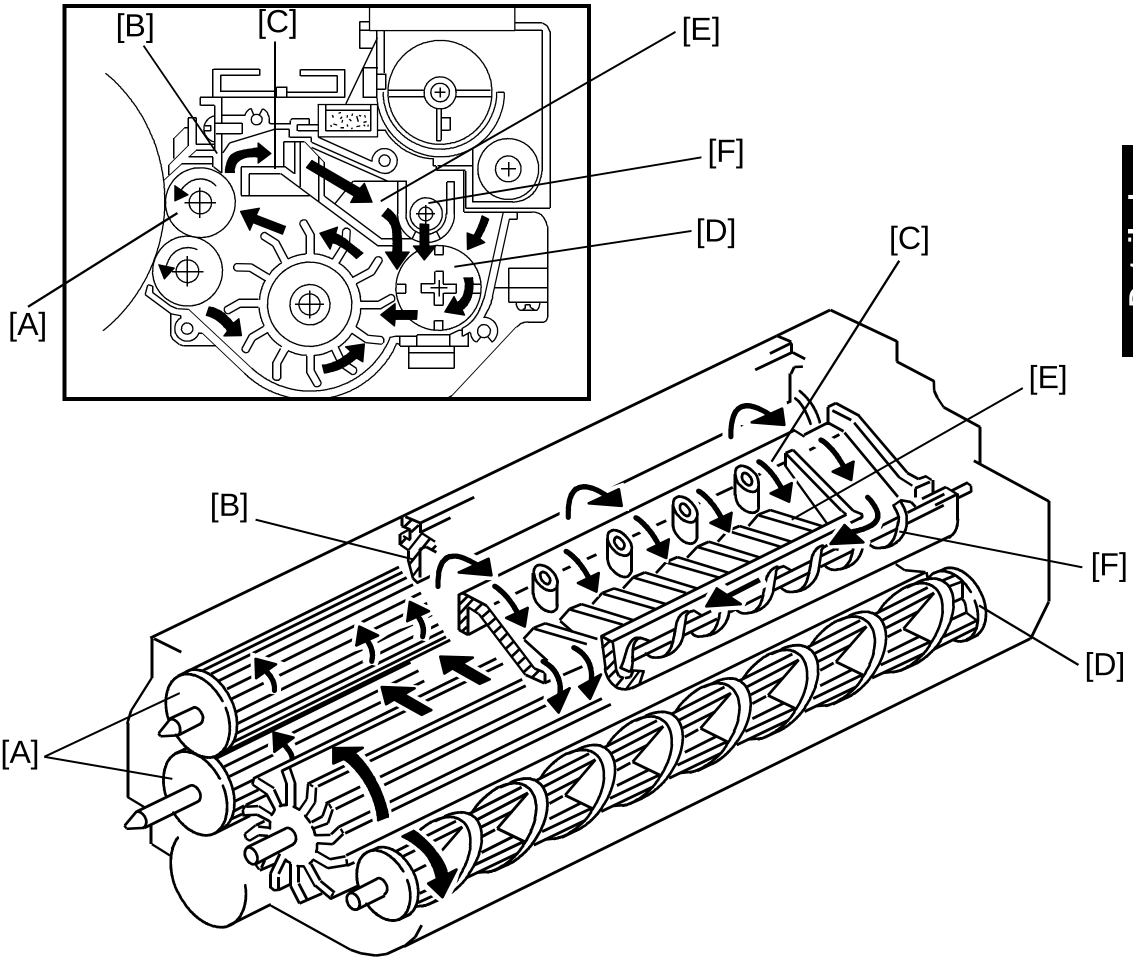


The gears of the development unit are driven by the development drive gear [A] when the development motor [B] (dc servomotor) turns.

The gears of the toner hopper are driven by the toner supply roller drive gear [C] when the toner supply clutch [D] activates.

The above gears are helical gears. Helical gears are more quiet than normal gears. The teeth of the development drive gear are chamfered so that they smoothly engage with the development roller gear [E] when the unit is installed.

4.3 CROSSMIXING



This copier uses a standard cross-mixing mechanism to keep the toner and developer evenly mixed. It also helps agitate the developer to prevent developer clumps from forming and helps create the triboelectric charge.

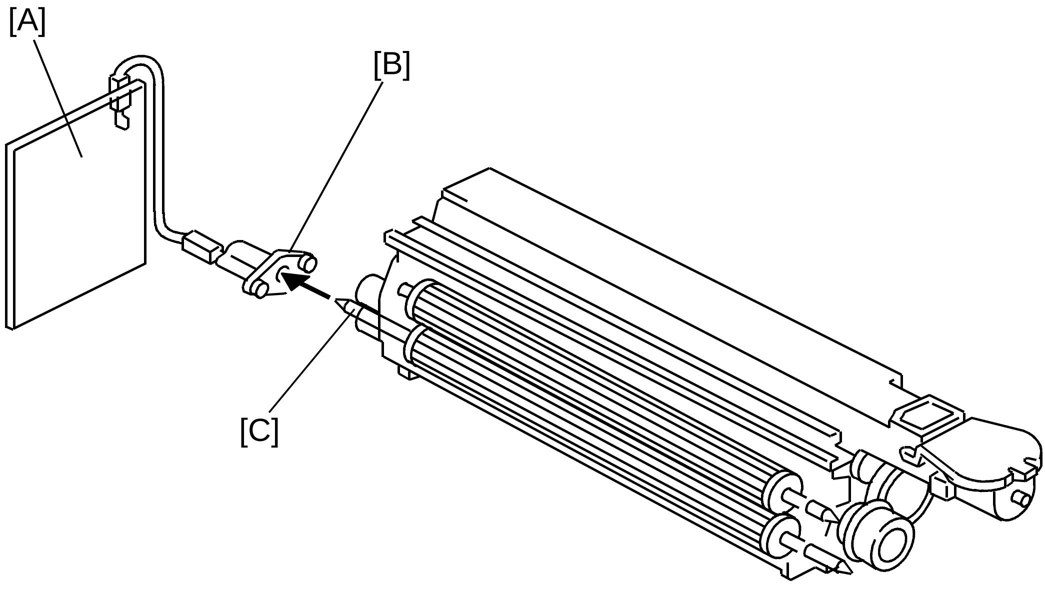
The developer on the turning development rollers [A] is split into two parts by the doctor blade [B]. The part that stays on the development rollers forms the magnetic brush and develops the latent image on the drum. The part that is trimmed off by the doctor blade goes to the backspill plate [C].

As the developer slides down the backspill plate to the agitator [D], the mixing vanes [E] move it slightly toward the rear of the unit. Part of the developer falls into the auger inlet and is transported to the front of the unit by the auger [F].

The agitator moves the developer slightly to the front as it turns, so the developer stays level in the development unit.

4.4 DEVELOPMENT BIAS

4.4.1 Overview



The high voltage control Board [A] applies the negative development bias to the lower sleeve roller through the receptacle [B] and the lower sleeve roller shaft [C]. Then the bias is applied to the upper sleeve roller through the rear sleeve roller holder made of conductive resin.

The development bias prevents toner from being attracted to the background area of the non-image area on the OPC drum where there is residual voltage. Also, the development bias is used to adjust image density according to the conditions the customer selected.

4.4.2 Bias Control In Copy Cycle

The bias output is determined by five factors.

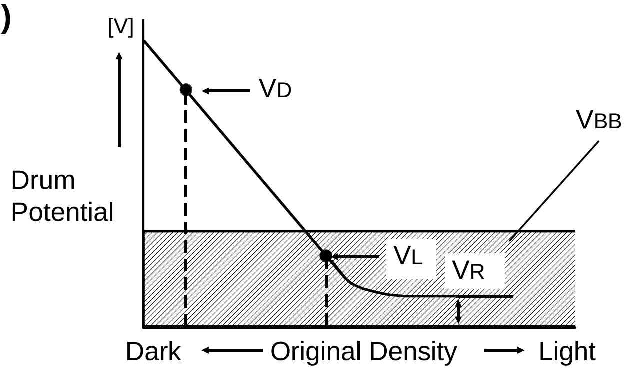
The total bias is described as;

ADS Mode: $V_B = V_{BB} + V_{BU} + V_{BMG} + V_{BA}$

Manual ID Mode: $V_B = V_{BB} + V_{BU} + V_{BMG} + V_{BM}$

V_B: Total bias
V_{BB}: Base bias
V_{BA}: ADS Compensation
V_{BU}: User Tool mode ID Selection Compensation
V_{BMG}: Magnification Compensation
V_{BM}: Manual ID Selection Compensation

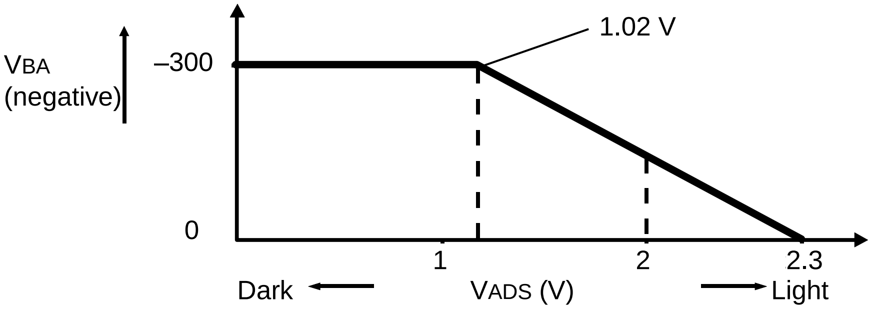
1) Base Bias (V_{BB})



As explained in the process control section, the base bias for development is determined by the residual voltage (V_R) measured in process control data initial setting.

$V_{BB} = V_R + (-220)$

2) ADS Compensation (V_{BA})



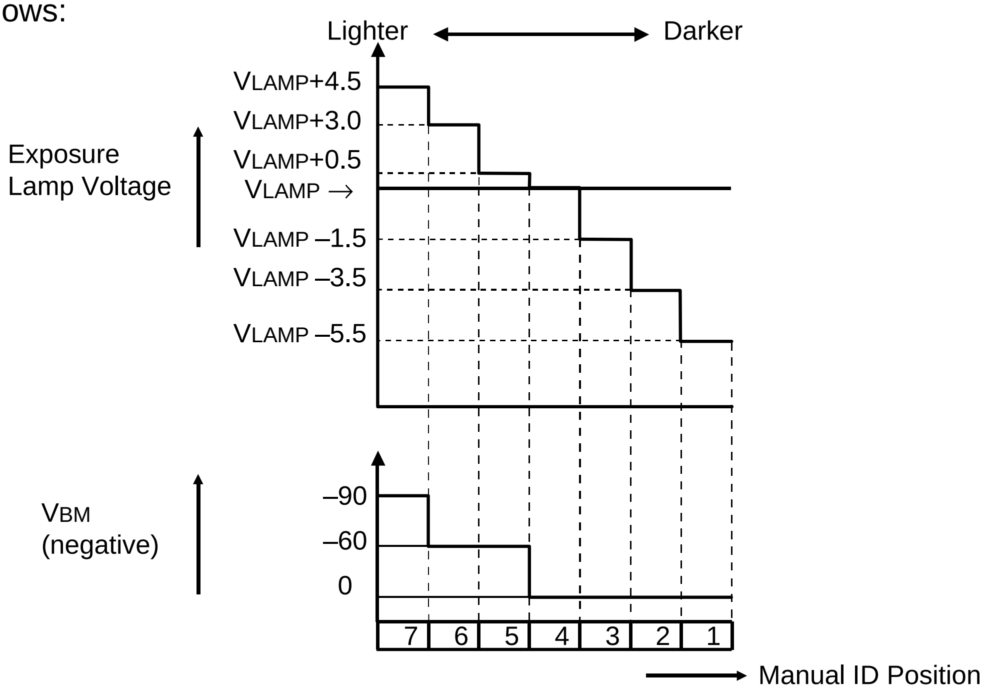
According to the original background density, the bias is compensated. The compensation value is determined with the voltage measured by the ADS sensor (ADS sensor output: V_{ADS}) as follows:

$V_{BA} = 234 \times (V_{ADS} - 2.3)$

NOTE: V_{BA} has a limited range from 0 V to –300 V.

3) Manual ID Selection Position Compensation (VBM)

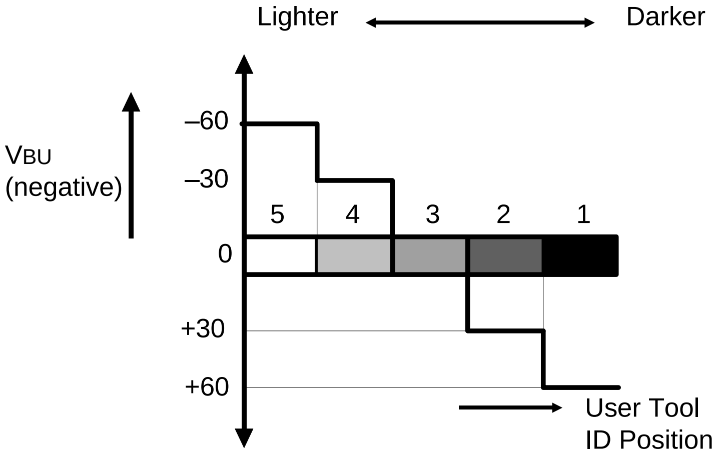
According to the manual ID selection position, the bias is compensated as follows:



VLAMP: Exposure lamp voltage at ID level 4. This value is determined at process control data initial setting.

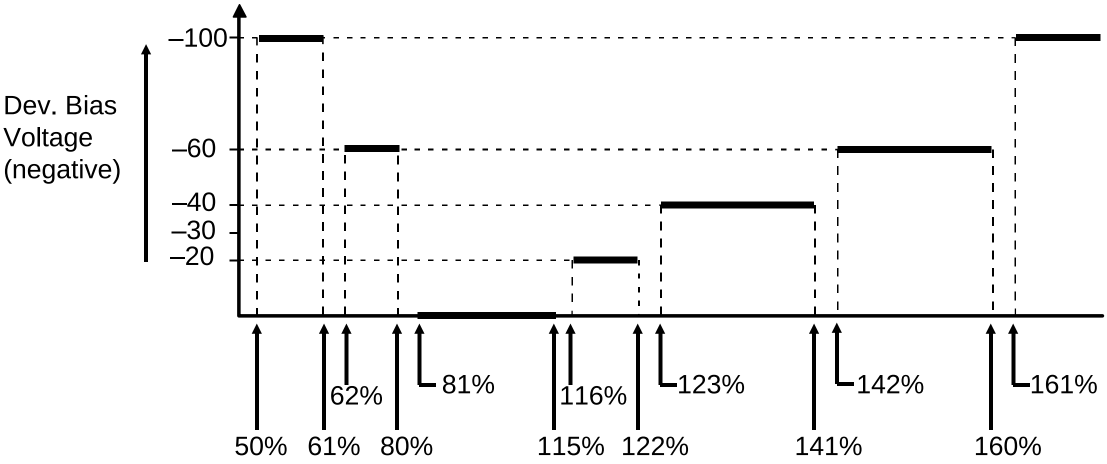
4) User Tool Mode ID Selection Compensation (VBU)

In the User Tool mode, the image density level can be selected from five steps. The VBU is determined by the User Tool ID position setting as follows:



5) Magnification Compensation (VBMG)

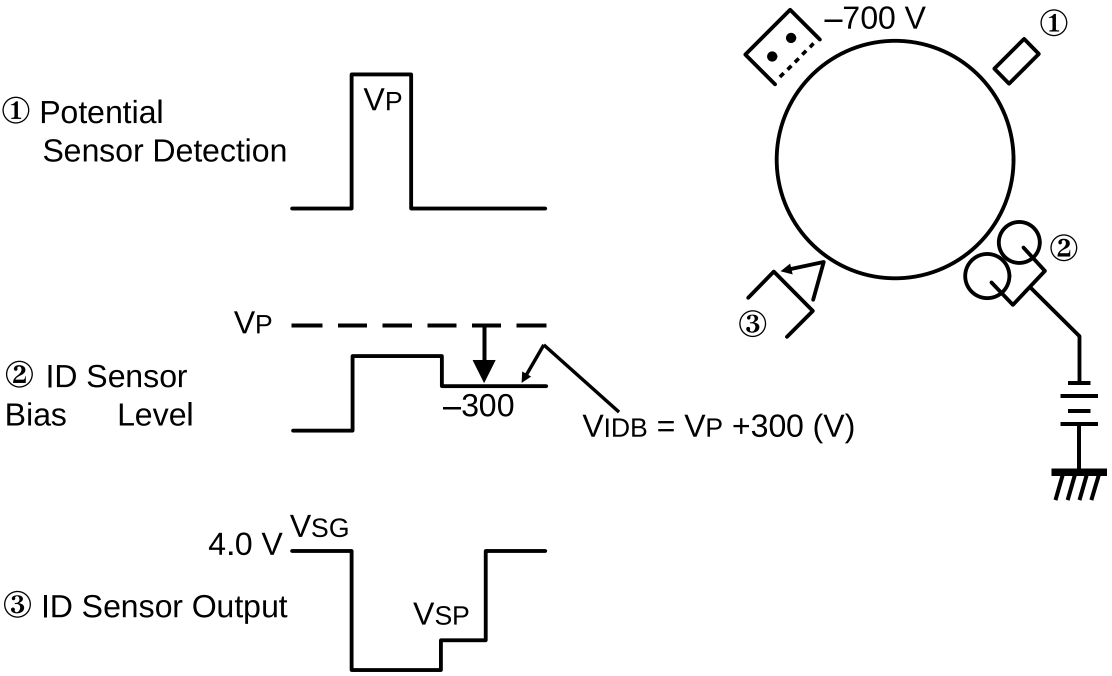
VBMG is determined by the selected reproduction ratio as follows:



4.4.3 Bias Control Out of Copy Cycle

To hold the toner on the sleeve rollers while the development sleeve rollers are rotating without image development, a constant –300 V bias is applied.

4.4.4 ID Sensor Pattern Bias


–700 V
①
① Potential Sensor Detection
VP
②
③
VP
② ID Sensor Bias Level
–300
VIDB = VP +300 (V)
4.0 V
VSG
③ ID Sensor Output
VSP

While developing the ID sensor pattern, ID sensor bias is applied. ID sensor bias is determined during process control initial setting as follows:

A charge is applied while grid voltage is –700 V to create the ID sensor pattern.

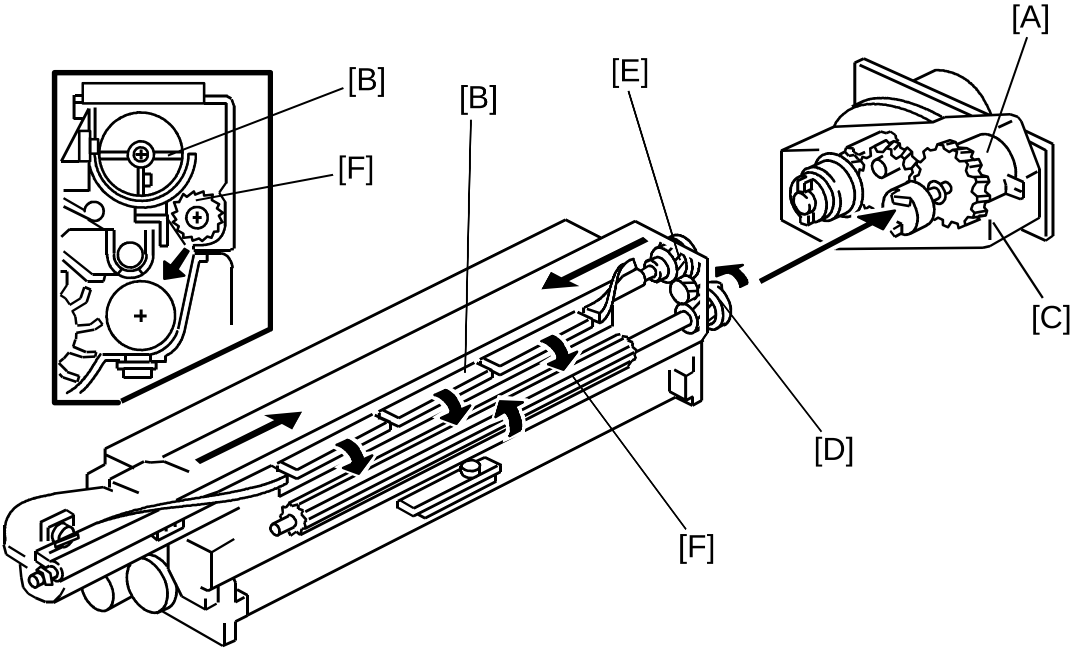
The drum potential (V_P) of the ID sensor pattern is checked.

The ID sensor bias (V_{IDB}) is adjusted so that it satisfies the following formula:

$$\begin{aligned} V_{IDB} &= V_P - (-300) \\ &= V_P + 300 \ \text{(V)} \end{aligned}$$

4.5 TONER SUPPLY

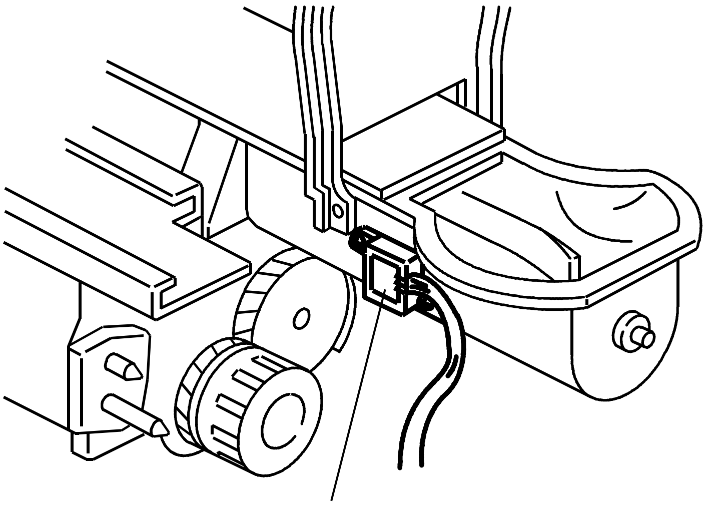
4.5.1 Toner Supply Mechanism



When the toner supply clutch [A] turns on, the agitator [B] moves the toner from front to rear and sends the toner to the toner supply roller.

The toner supply clutch [A] located inside the development motor [C] applies the rotation from the development motor to the toner supply roller gear [D], which drives the agitator gear [E]. Toner is caught in the grooves on the toner supply roller [F]. Then, as the grooves turn past the opening, the toner falls into the development unit.

4.5.2 Toner End Detection



[A]

The toner end sensor [A] detects if sufficient toner remains in the toner hopper or not. The toner end sensor monitors toner end condition once when the toner supply clutch turns on. When there is little toner inside the toner hopper and toner pressure on the toner end sensor becomes low, the toner end sensor outputs a pulse signal for each (one detection per one copy).

The toner near end indication is displayed on the LCD after receiving the pulse signal 150 times (If no pulse signal is output twice continually, the pulse count is canceled).

Fifty copies are allowed after entering toner near end condition. After fifty copies are made in toner near end condition, the machine enters the toner end condition and copying is prohibited.

When the main switch is turned off and on, or the front door is opened and closed, the machine drives toner supply mechanism and monitors the toner end sensor output. If the toner end sensor does not output the pulse signal twice continually, the toner end condition is canceled.

4.5.3 Toner Supply Control

By using an SP mode ($\boxed{1}$ Adjustment mode: PAGE 7), the following 3 kinds of toner supply controls can be selected.

- Auto Process Control Mode
- Detect Mode
- Fixed Mode

1) Auto Process Control Mode

Originals have various image proportions and image densities. For the best toner supply control, it is necessary to link the amount of toner supplied on each copy cycle to the amount of toner consumed for each copy.

Fuzzy control is used in this model to provide this kind of toner supply control.

Fuzzy Control 1

According to data of the ID sensor and TD sensor, the CPU checks the following at every copy cycle:

1. The results of toner supply control (TD sensor output) in the previous copy cycle.

2. How quickly the toner density is changing.
   Then the CPU decides the most suitable toner supply amount (toner supply clutch on time) for the next copy cycle by using fuzzy logic.

Fuzzy Control 2

The image on the OPC drum changes due to variations in toner chargeability (influenced by the environment) even if toner concentration is constant.

The ID sensor directly checks the image on the OPC drum and shifts the VREF data under fuzzy control to keep the image on the OPC drum constant.

NOTE: The toner supply amount is changed at every copy cycle. The target toner density sensor output is updated under the following conditions:

1. During toner density sensor initial setting
2. During process control data initial setting
3. After the copy job is completed in case that 10 or more copies have been made since the last update.

(Refer to section 2.1.4 "Image Density Control" for details.)

2) Detect Mode

In this mode, only the TD sensor is used to control the toner concentration (VREF data is fixed). The machine performs only fuzzy control 1.

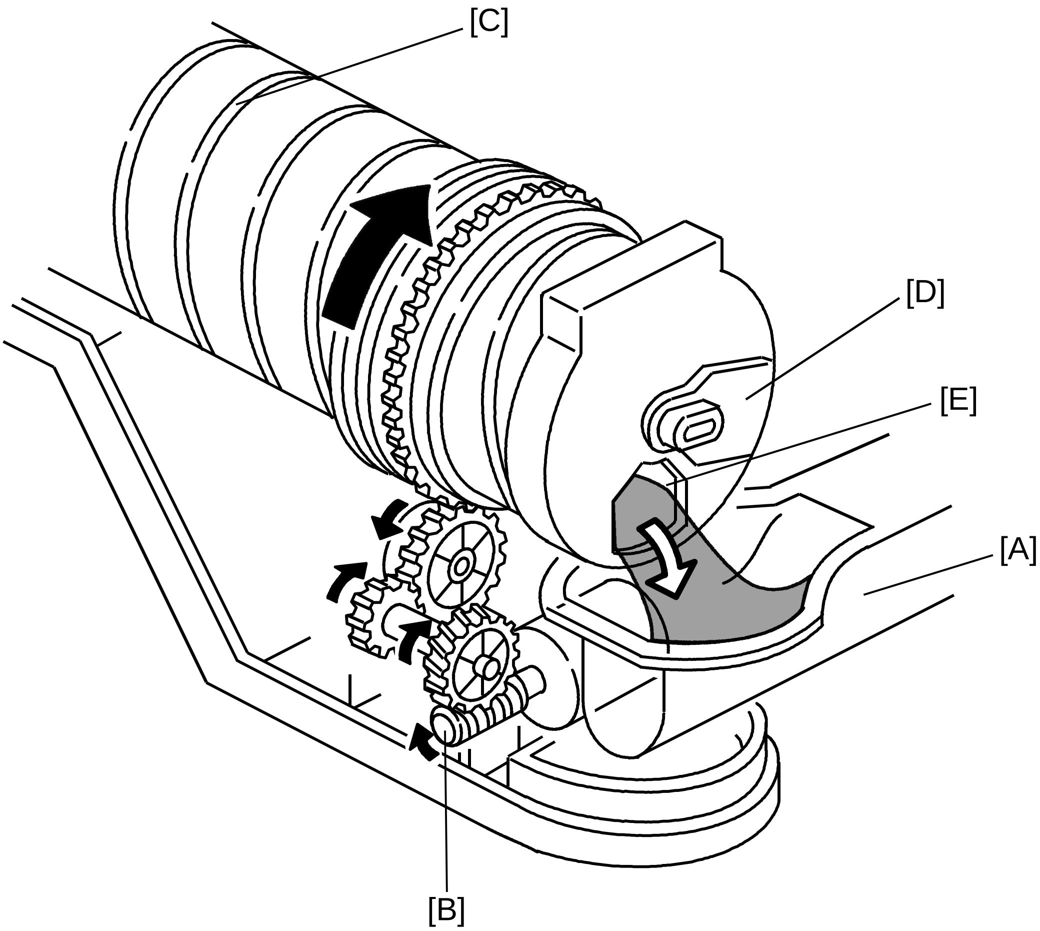
In ID sensor abnormal condition or Drum Potential sensor abnormal condition, the machine automatically enter this mode.

3) Fixed Mode

In this mode, a fixed amount of toner is supplied every copy cycle as determined (4%, 7%, 11%, 14%) by SP mode (1 Adjustment mode: PAGE 7). There is no overtoning detection mechanism.

In TD sensor abnormal condition, the machine automatically enters this mode.

4.5.4 Bottle Drive Mechanism



For easy access, the toner bottle is just inside the front cover. The bottle is positioned horizontally.

The bottle drive mechanism transports toner from the bottle to the toner hopper [A]. A worm gear [B] on the bottle drive motor drives this mechanism.

The toner bottle has a spiral groove [C] that helps move the toner to the toner hopper.

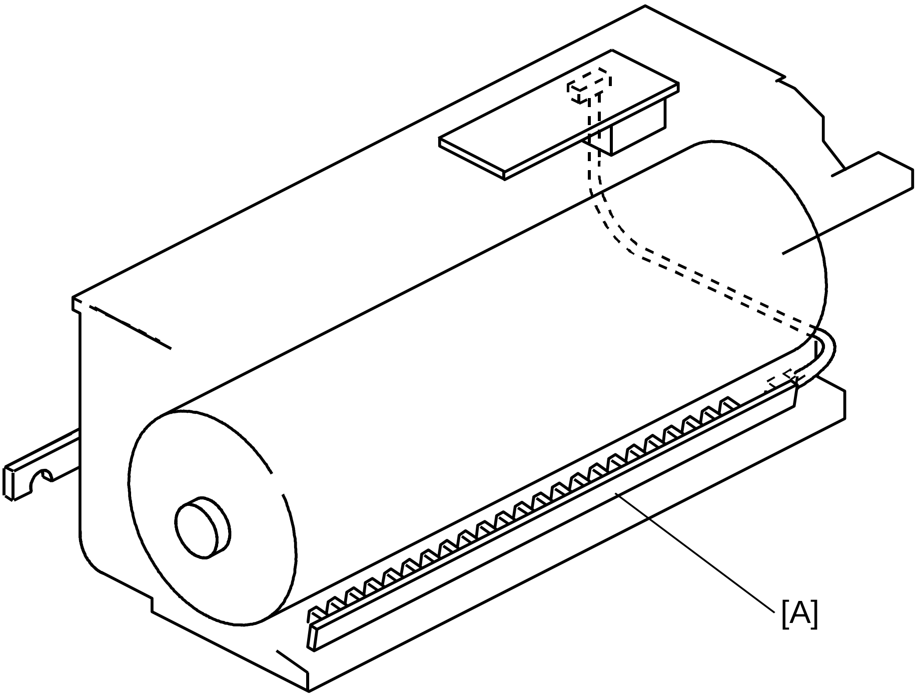
To prevent toner from scattering when the toner bottle is removed from the holder, toner shutter [D] which covers the hole [E] is installed on the toner bottle.

When the toner is set on the holder and the lever is lowered, the toner shutter [D] opens to supply toner to the toner hopper.

The bottle drive motor turns on 0.7 seconds when the toner end sensor turns on twice continually.

5. IMAGE TRANSFER

5.1 PRE-TRANSFER LAMP

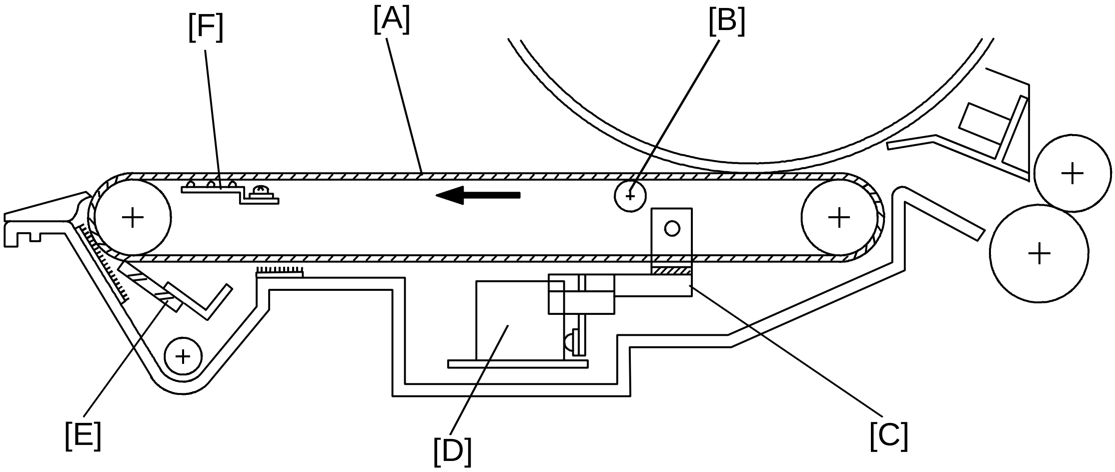


The pre-transfer lamp [A] located in the drum unit is used to prevent incomplete toner transfer.

After the latent image is developed but before the image is transferred to the copy paper, the drum surface is illuminated by the pre-transfer lamp. This illumination reduces the negative potential on the drum surface charged by the main charge corona and partially discharged by the exposure. This makes image transfer easier.

The pre-transfer lamp is turned on and off by the charge power pack at the same time as when the main motor turns on and off.

5.2 IMAGE TRANSFER AND PAPER SEPARATION OVERVIEW



This model uses a unique transfer belt unit instead of the transfer and separation corona unit. The transfer belt unit consists of the following parts:

[A] Transfer belt
A belt (length: 321 mm) with high electrical resistance which holds a high negative electrical potential and attracts the toner on the OPC drum onto the paper. Also the electrical potential attracts the paper itself and helps paper separation from the OPC drum.

[B] Transfer bias roller
Applies transfer voltage to the transfer belt.

[C] Transfer belt lift lever (driven by a solenoid)
Lifts the transfer belt to contact the transfer belt with the OPC drum.

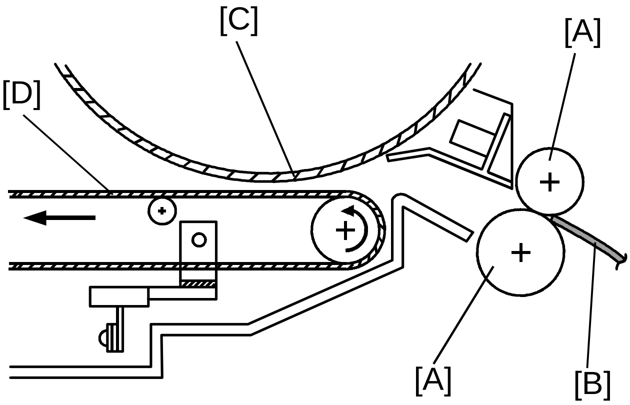
[D] Transfer power pack
Generates the constant transfer current.

[E] Transfer belt cleaning blade
Removes toner attached on the transfer belt to prevent the rear side of the paper from being stained.

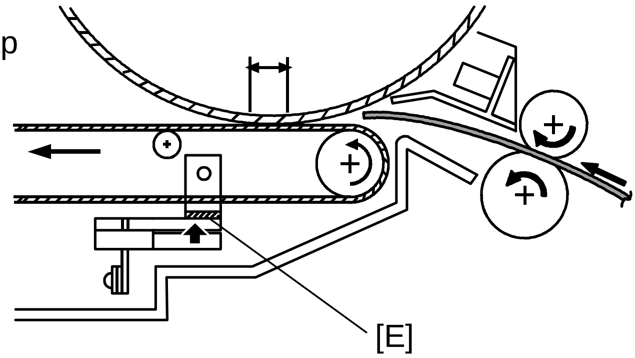
[F] Discharge plate
Helps paper separation from the transfer belt by discharging the remaining negative charge on the transfer belt.

5.3 IMAGE TRANSFER AND PAPER SEPARATION MECHANISM

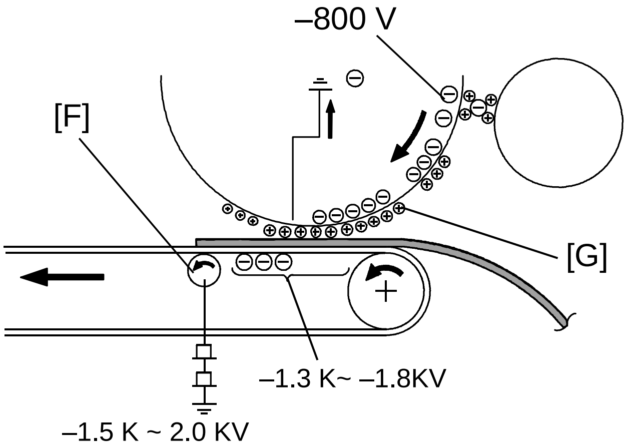
The registration rollers [A] starts feeding the paper [B] to the gap between the OPC drum [C] and the transfer belt [D] in proper timing.



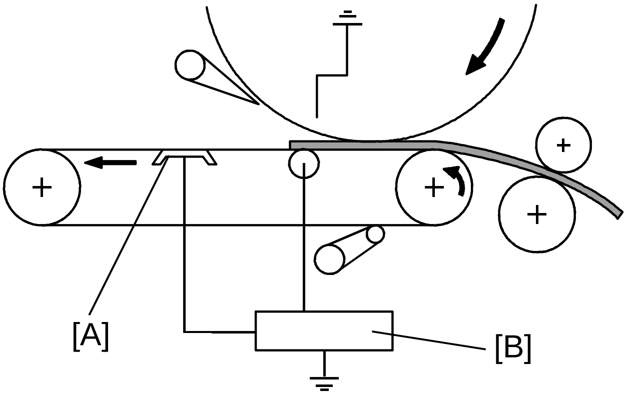
Immediately when the leading edge of the paper reaches the gap between the transfer belt and the OPC drum, the transfer belt lift lever [E] raises the transfer belt to contact the transfer belt and the OPC drum. The lift lever is driven by a solenoid



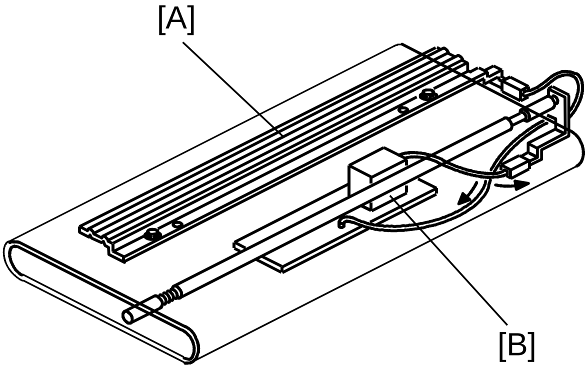
Then a negative transfer bias –1.5 K ~ –2.0 KV is applied to the transfer bias roller [F] and attracts the positively charged toner [G] on the OPC drum. It also attracts the paper and separates the paper from the OPC drum.



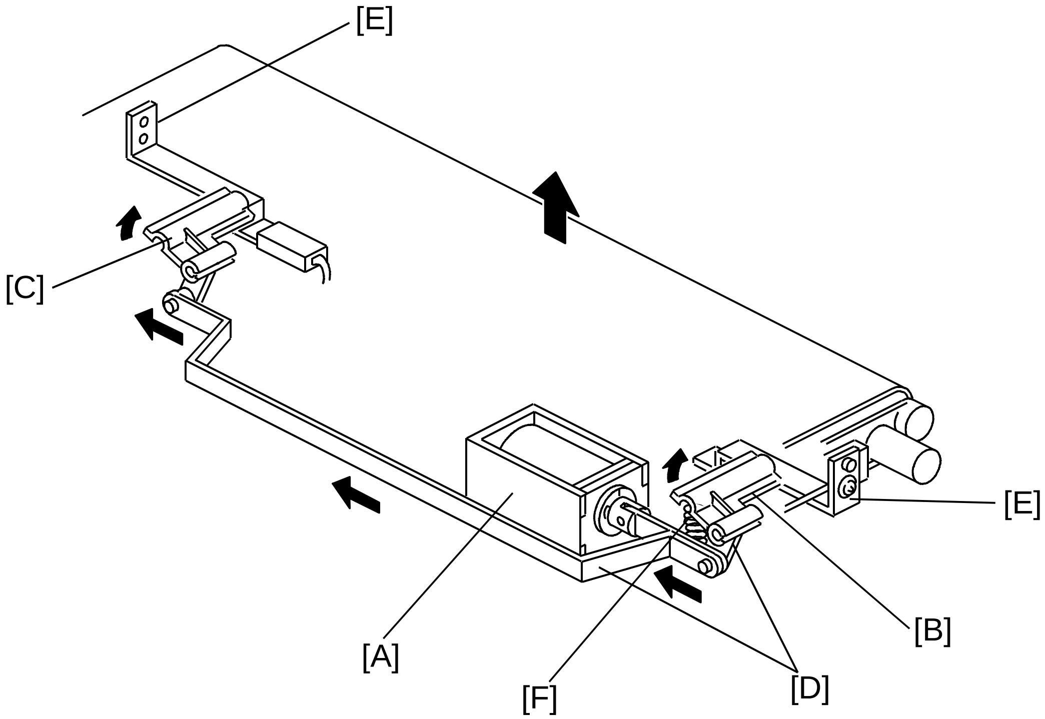
After the image transfer is completed, the charge on the transfer belt holds the paper to the transfer belt.
Before separating the paper from the transfer belt, the transfer belt is discharged by the discharge plate [A].



The transfer power pack [B] inside the transfer belt unit monitors the current fed back from the discharge plate to adjust the transfer current. This way, the current stays constant even if the paper, environmental conditions, and the transfer belt surface resistance are changed.



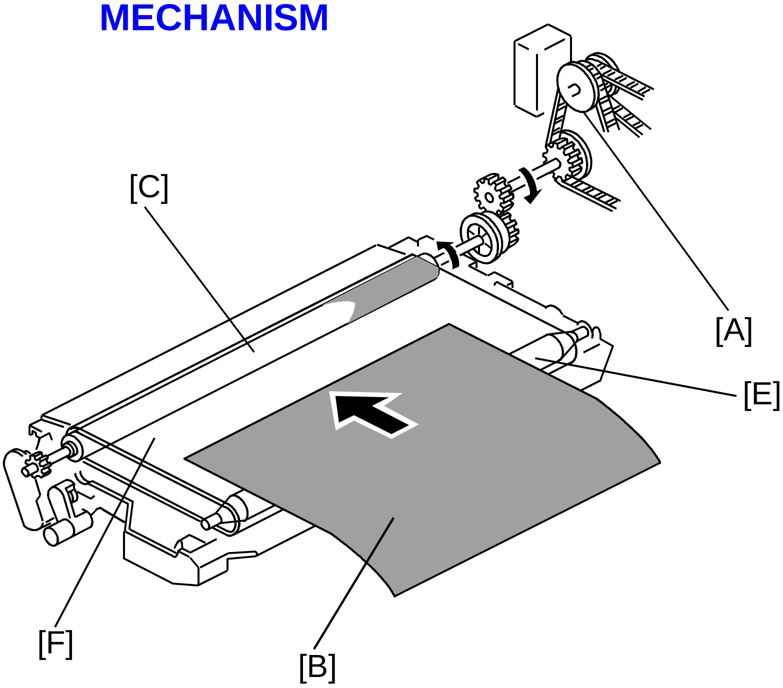
5.4 TRANSFER BELT UNIT LIFT MECHANISM

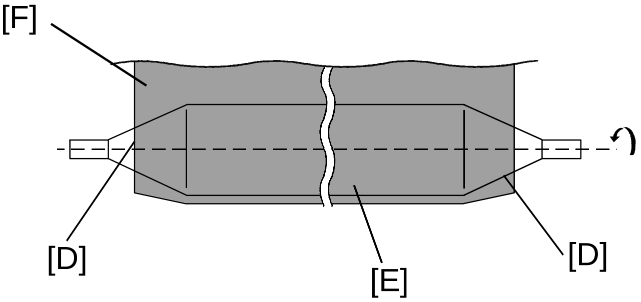


The transfer belt lift solenoid [A] located inside the transfer belt unit turns on to raise the transfer belt to contact the OPC drum at the appropriate timing.
The front lever [B] and the rear lever [C] are connected to the solenoid by links [D] and push up the stays [E] when the solenoid turns on.
The support spring [F] helps the solenoid to raise the transfer belt.
The solenoid turns off after the copy job is finished.
The transfer belt must be released from the OPC drum for the following reasons:

1. To prevent the ID sensor pattern on the OPC drum from being rubbed by the transfer belt because the transfer belt is located between the development unit and the ID sensor.
2. To decrease the load to the transfer belt cleaning blade, it is better to keep toner on the non-image area (for example VD, VL, ID sensor pattern developed during process control data initial setting) from being transferred onto the transfer belt.
3. To prevent change of OPC drum characteristics by the influence of additives inside the rubber belt.

5.5 PAPER TRANSPORTATION AND BELT DRIVE MECHANISM



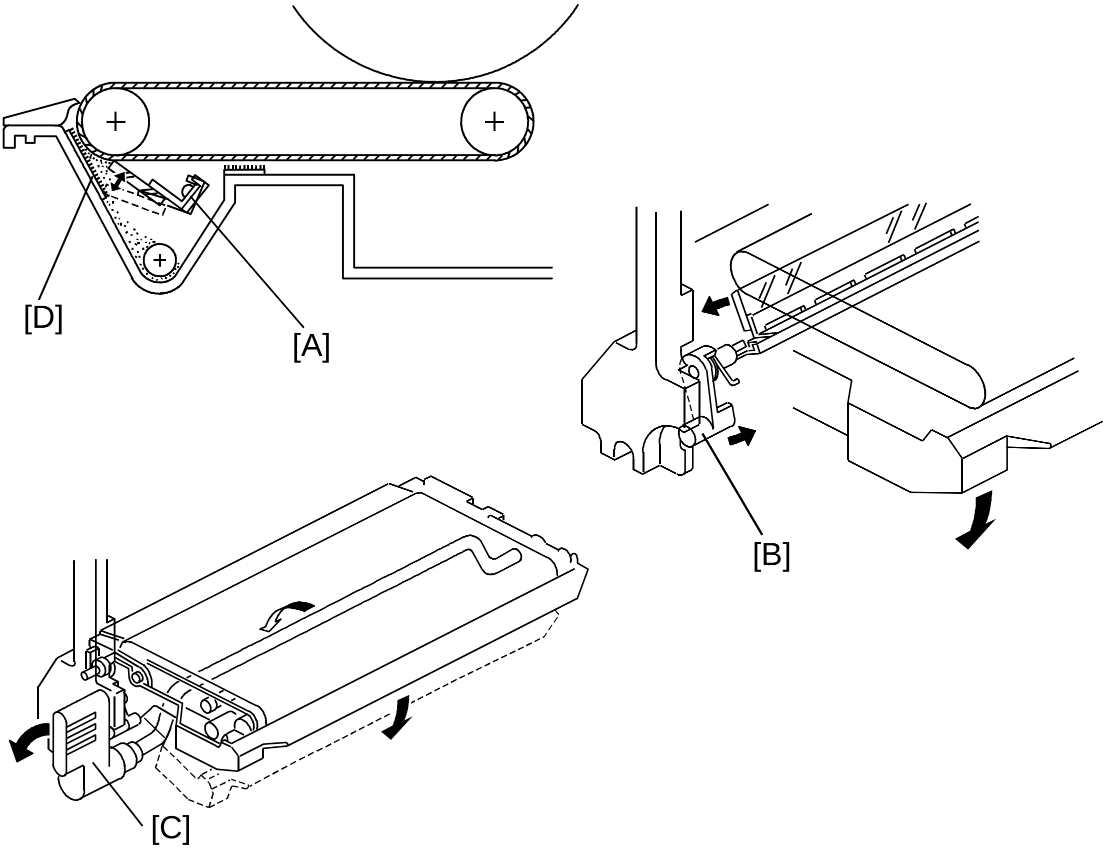


The transfer belt is driven by the main drive motor [A] through belt and gears. Since the transfer belt electrically attracts the paper [B], the transport fan is not required.

The charge on the transfer belt is discharged by the discharge plate to reduce paper attraction and paper is separated by the paper stiffness above the transfer belt drive roller [C] where the transfer belt is turning.

The tapered parts [D] at both sides of the roller [E] help keep the transfer belt [F] at the center position.

5.6 TRANSFER BELT CLEANING MECHANISM

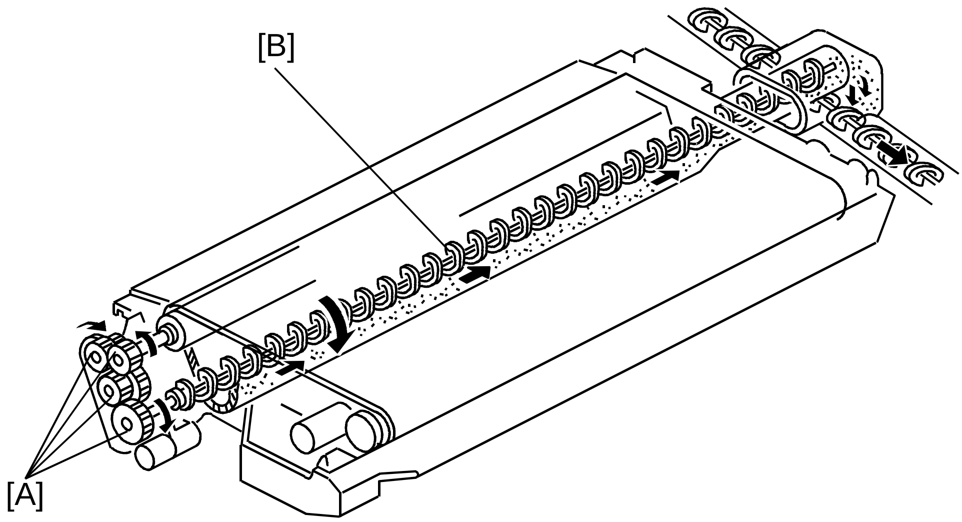


Some toner may adhere to transfer belt when paper jams occur, or when the by-pass feed table side fences are set in the wrong position causing the erase lamp to miss some toner. The adhered toner must be removed to prevent the rear side of the copy paper from being stained.
The cleaning blade [A] scrapes off any toner remaining on the transfer belt. A counter blade system is used for the transfer belt cleaning. The surface of the transfer belt is coated to make it smooth and so prevent the cleaning blade from being flipped by the transfer belt.

The lever [B] on the front end of the cleaning blade releases the cleaning blade when the transfer belt unit is lowered and the lever is pushed by the transfer belt unit support prop. (The transfer belt unit is lowered when the lever [C] is turned anti-clockwise)

When the cleaning blade is released, the edge of the cleaning blade rubs the seal so that the seal [D] removes the toner or paper dust on the cleaning blade edge.

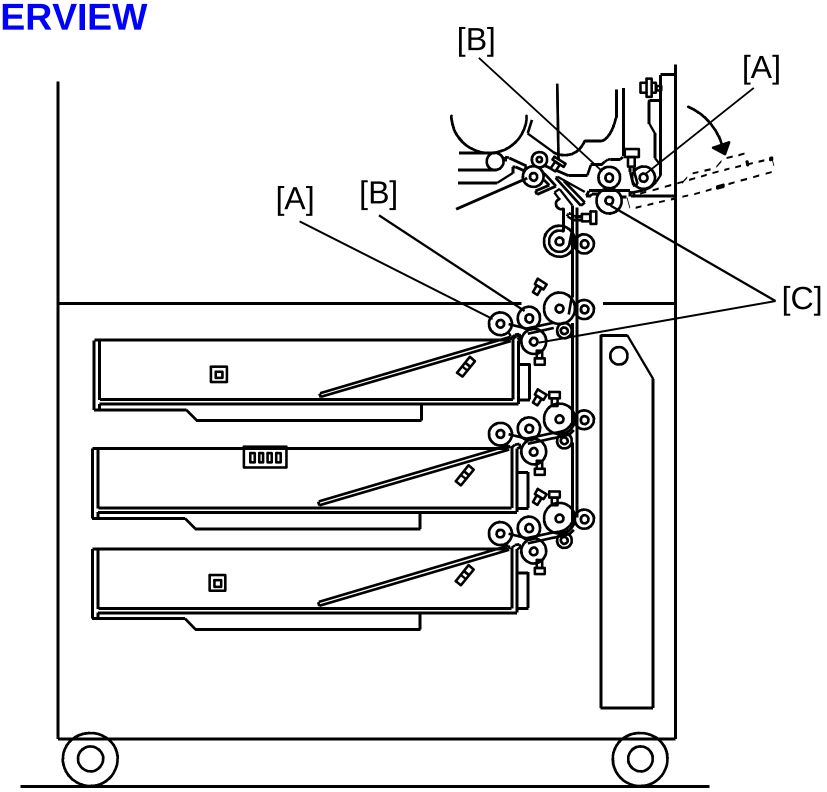
5.7 TONER COLLECTION MECHANISM



Through idle gears [A], transfer belt drive is transmitted to the toner collection coil [B]. The toner collection coil transports the collected toner to the toner collection bottle. See section 2.2.5 for details.

6. PAPER FEED

6.1 OVERVIEW



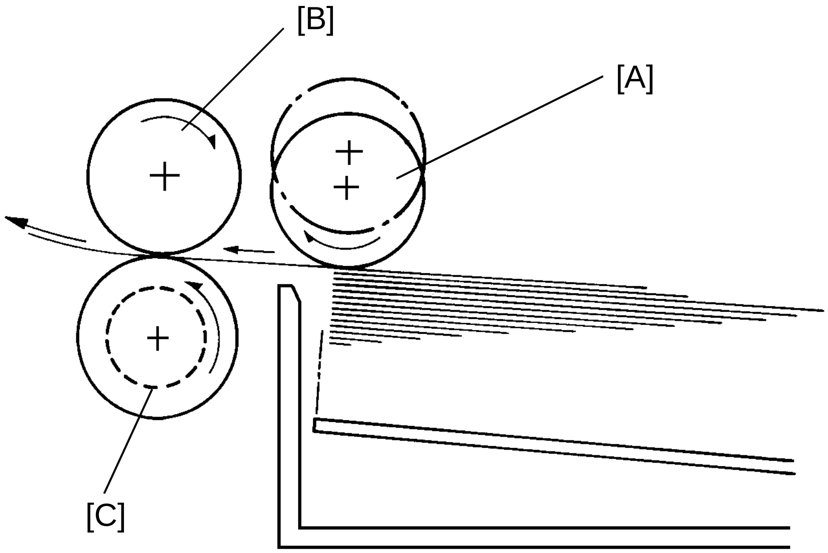
This model has three drawer tray paper feed stations.
The following table shows the configuration of each feed stations of the A095 and A096 copiers.

Feed station	A095 copier	A096 copier
1st	550 sheets tray	500 + 500 sheets tandem feed tray
2nd	550 sheets universal tray	550 sheets universal tray
3rd	550 sheets tray	1500 sheets built-in LCT

Paper can also be fed using the by-pass feed table which has an independent feed mechanism. The by-pass feed table can hold 50 sheets of paper.

All feed stations use an FRR feed system. Rotation of the pick-up roller [A] drives the top sheets of paper from each tray to the feed [B] and the separation [C] rollers. The feed and separation rollers then take over paper drive. If more than one sheet is fed by the pick-up roller, the separation rollers rotates in the opposite direction and prevents all but the top sheet from passing through to the registration rollers.

6.2 FRR FEED SYSTEM



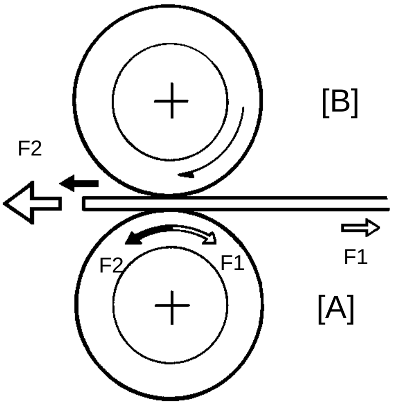
This copier uses an FRR paper feed system using three rollers.

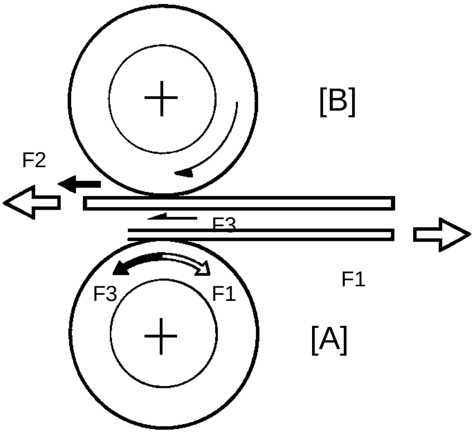
6.2.1 Pick-up Roller

The pick-up roller [A] is not in contact with the paper stack before it starts feeding paper. Shortly after the Start key is pressed, the pick-up roller drops down and feeds the top sheet between the feed [B] and the separation rollers [C]. At almost the same time that the paper’s leading edge arrives at the feed roller, the pick-up roller lifts off the paper stack so that it does not interfere with the operation of the feed and separation rollers. The feed and separation rollers then take over the paper feed process.

6.2.2 Feed and Separation Rollers

There is a one-way bearing inside the feed roller so it can turn only in one direction. The separation roller is driven in the opposite direction to the feed roller. The separation roller, however, is driven through a slip clutch (torque limiter clutch) which allows it to turn in either direction depending on the friction between the rollers. The separation roller solenoid keeps the separation roller in contact with the feed roller.

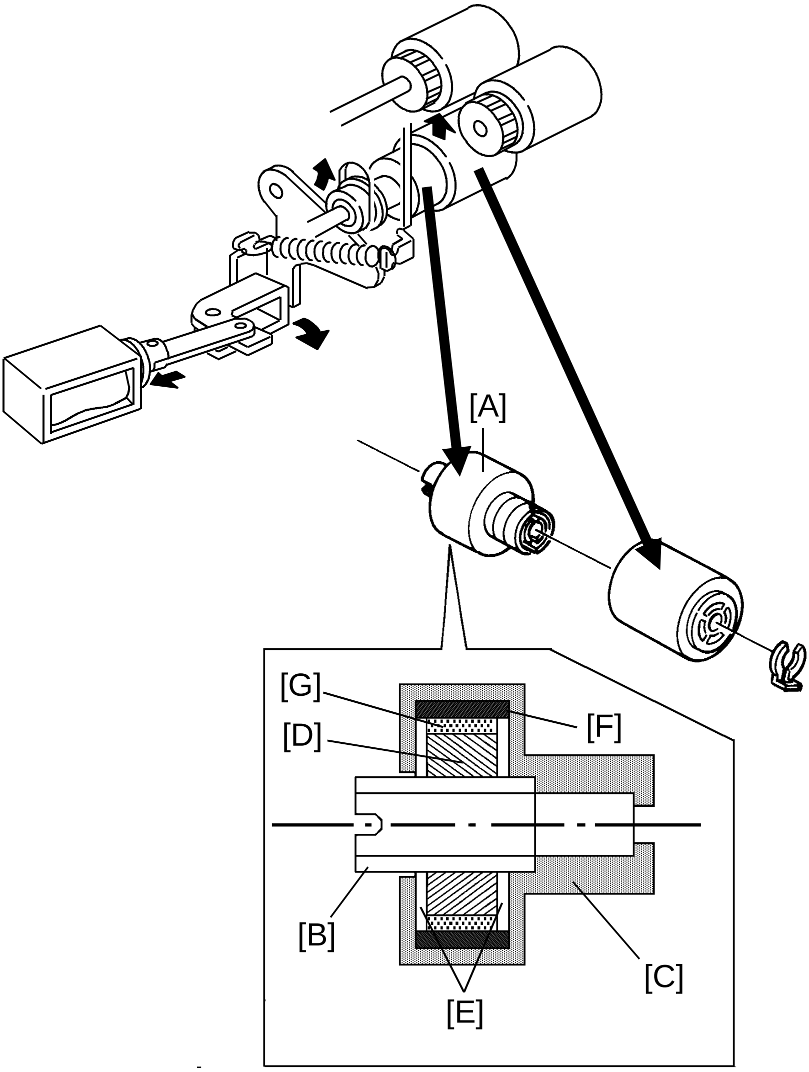




The direction in which the separation roller [A] turns depends on the frictional forces acting on it. The slip clutch applies a constant clockwise force (F1). When there is a single sheet of paper being driven between the rollers, the force of friction between the feed roller [B] and the paper (F2) is greater than F1. So, the separation roller turns counterclockwise.

If two or more sheets are fed between the rollers, the forward force on the second sheet (F3), becomes less than F1 because the friction between the two sheets is small. So, the separation roller starts turning clockwise and drives the second sheet back to the tray.

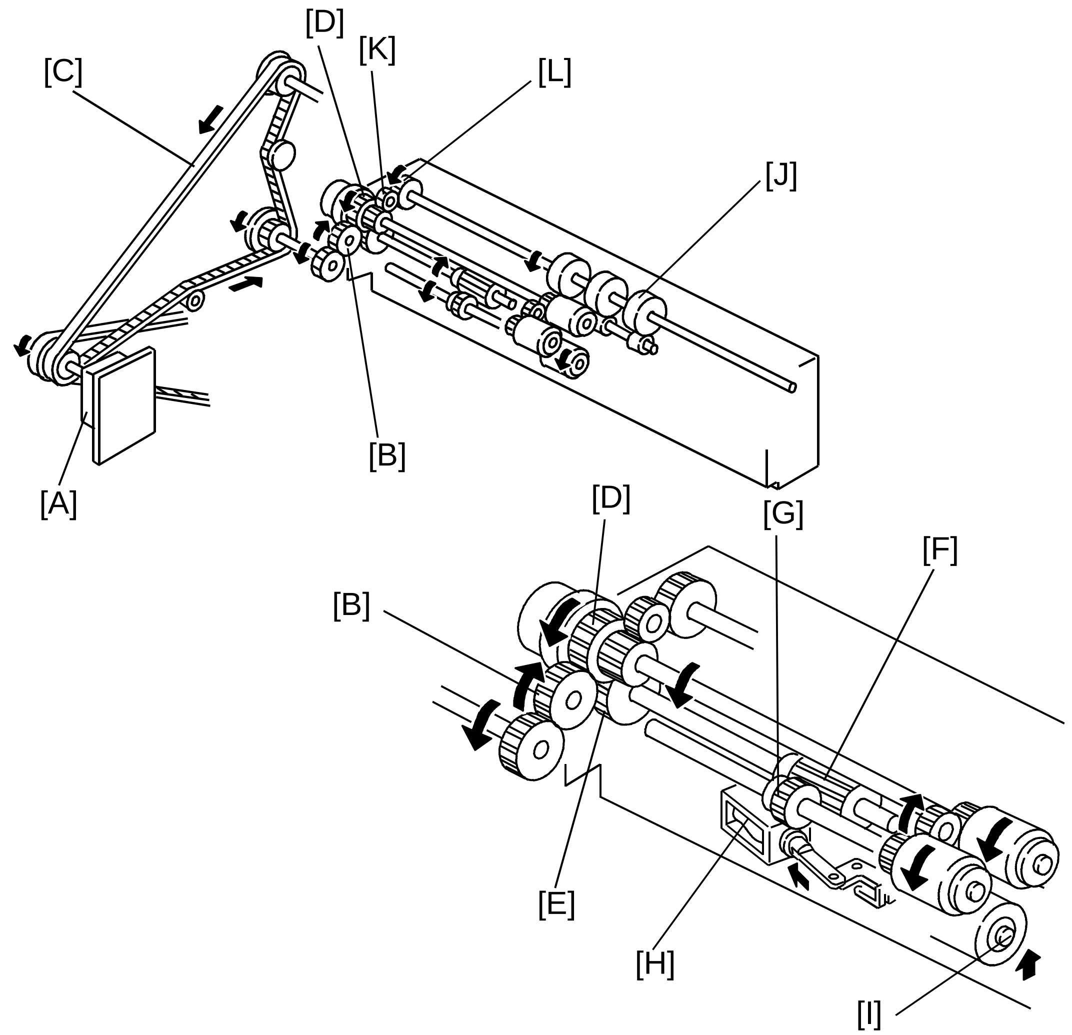
6.3 SLIP CLUTCH MECHANISM



The slip clutch [A] consists of the input hub [B] and the output hub [C] which is the case of the clutch as well. The magnetic ring [D] and the steel spacers [E] are fitted onto the input hub. The ferrite ring [F] is fitted into the output hub. Ferrite powder [G] packed between the magnetic ring and the ferrite ring [F] generates a constant torque due to magnetic force. The input hub and the output hub slip when the rotational force exceeds the constant torque.

This type of slip clutch does not require lubrication.

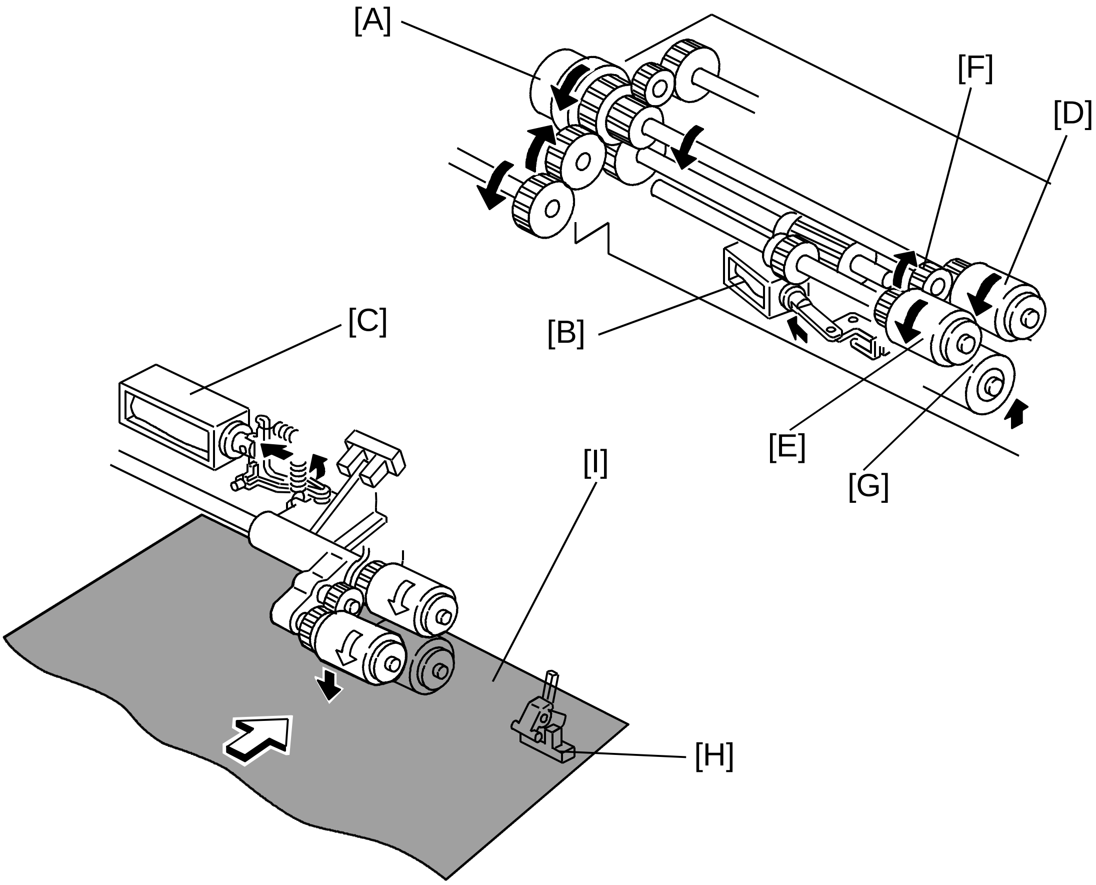
6.4 FRR FEED DRIVE MECHANISM



The rotation of the paper feed motor [A] is transmitted to the gear [B] via the timing belt [C], and then transmitted to the separation roller via the feed clutch gear [D], gear [E], gear [F] and gear [G].

If the paper feed station is not selected, the separation roller solenoid [H] de-activates and the separation roller [I] rotates freely in the reverse direction of paper feeding.

Gear [B] also transmits the drive to the vertical transport roller [J] via gear [D], idle gear [K] and gear [L].



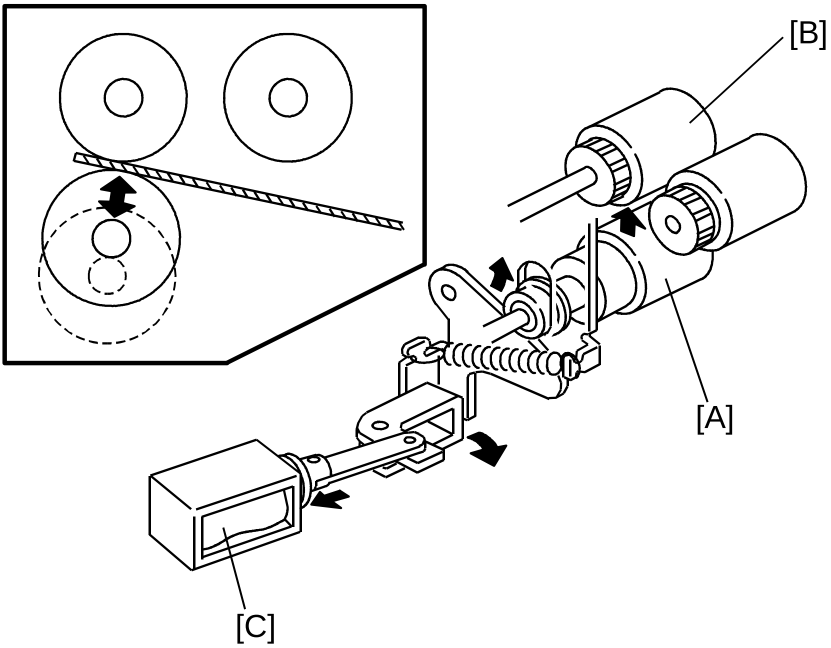
When the paper feed station is selected and the start key is pressed, the feed clutch [A], separation roller solenoid [B], and the pick-up solenoid [C] turn on at once.

When the feed clutch [A] activates to rotate the feed roller [D], the feed roller and the pick-up roller [E] turn together because they are linked by the idle gear [F].

When the separation roller solenoid [B] turns on, the separation roller [G] contacts the feed roller [D] then rotates together with the feed roller in spite of the separation roller’s drive in the opposite direction due to the torque limiter function in the separation roller [G].

When the pick-up solenoid [C] activates, the pick-up roller [E] lowers to make contact with the top sheet of the paper stack and send it to the feed and separation rollers.
When the paper feed sensor [H] detects the leading edge of the paper [I], the pick-up solenoid de-energizes to lift the pick-up roller and the paper feed clutch de-energizes at a certain time to wait until it is ready to feed to the registration roller.

6.5 SEPARATION ROLLER RELEASE MECHANISM



In this model, the separation roller [A] is normally away from the feed roller [B]. When the paper feed station is selected, the separation roller solenoid [C] contacts the separation roller to the feed roller as explained in the previous two pages.

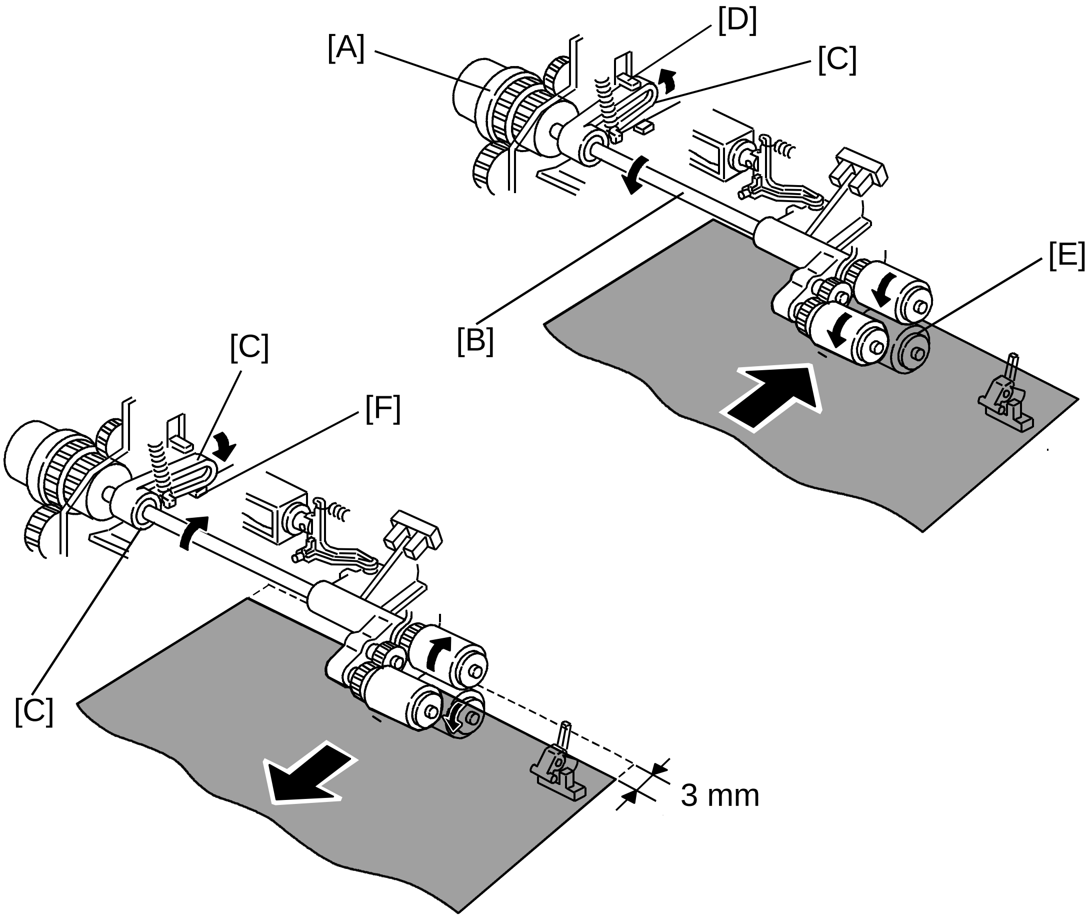
This contact/release mechanism has the following three advantages:

1. When the paper feed motor turns on, all separation rollers in each feed stations rotate. If the separation roller is away from the feed roller, it reduces the mechanical load to the paper feed motor and drive mechanism, and also reduces wear of the rubber surface of the separation roller due to the friction between the separation roller and the feed roller.

2. After paper feeding is completed, paper sometimes remains in the gap between the feed roller and the separation roller.
   If the feed tray is drawn out in this condition, it is possible for the remaining paper to be torn.
   When the separation roller is away from the feed roller, remaining paper is released from the gap between the feed and the separation rollers.

3. When paper misfeeds occur around this area, the customer can easily pull out the jammed paper between the feed and the separation rollers because the separation roller is away from the feed roller.

6.6 PAPER RETURN MECHANISM



When the paper feed clutch [A] activates and the feed roller drive shaft [B] rotates, the lever [C] rotates together with the shaft. However, the lever is immediately stopped by the stopper [D].

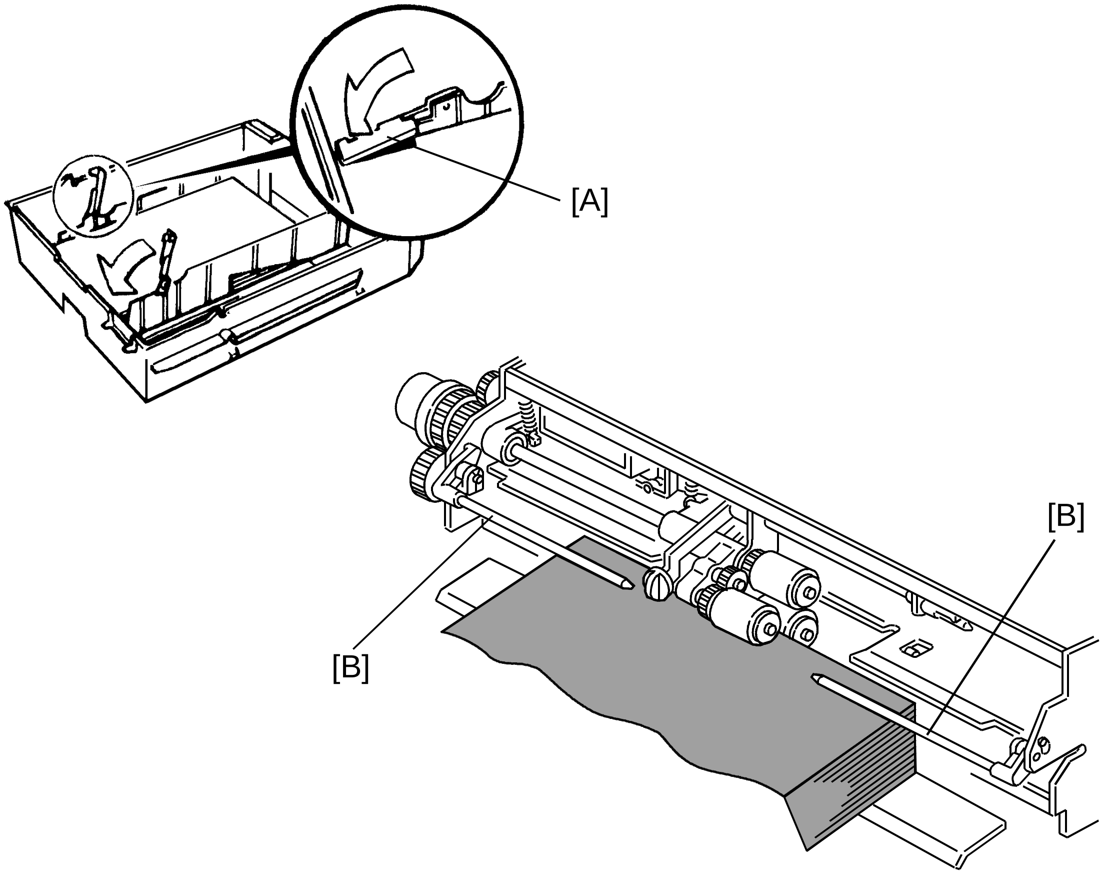
After all paper is fed and the paper feed clutch turns off, the paper feed motor still rotates to turn the separation roller [E] in the reverse direction. The separation roller, still contacting the feed roller, turns the feed roller in the reverse direction until the lever hits the rubber cushion [F].

By this feed roller reverse mechanism, the paper remaining in the gap between the feed and the separation rollers returns 3mm to the paper feed tray.

After that, the separation roller solenoid turns off to move the separation roller away from the feed roller. This releases the leading edge of the paper and drops the paper to the paper feed tray.

This prevents remaining paper from being torn when the feed tray is drawn out.

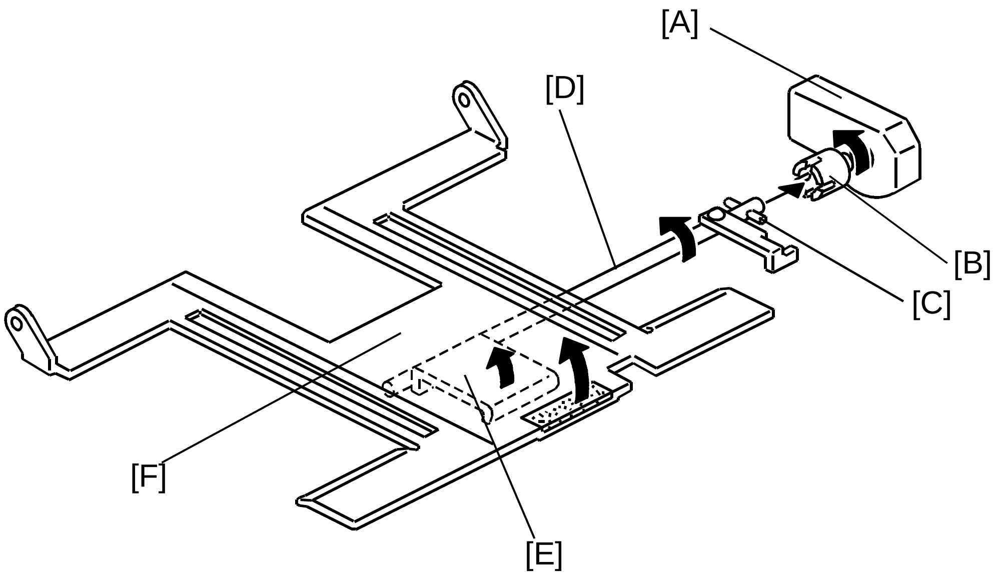
6.7 PAPER SKEW PREVENTION MECHANISM



In this model, paper corner holders [A] are not used to facilitate paper loading.

Instead of the corner holders, both paper press arms [B] press down both paper side edges, especially in the case of paper with a face curl. This helps to keep paper from being guided by the tray side fences to prevent paper skew or jam.

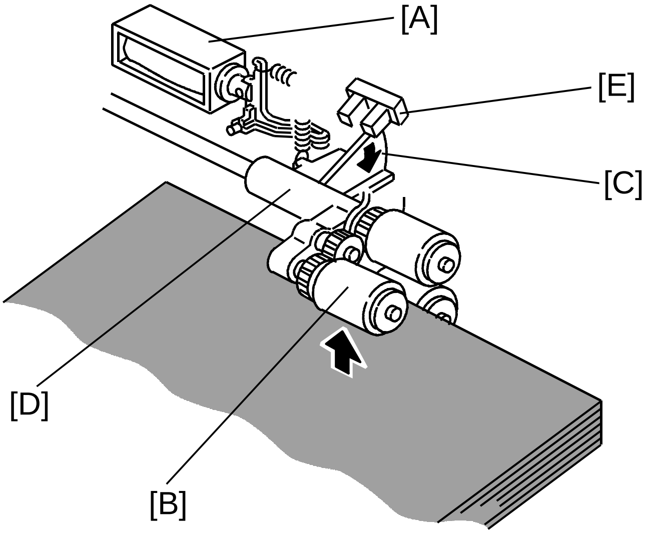
6.8 PAPER LIFT MECHANISM

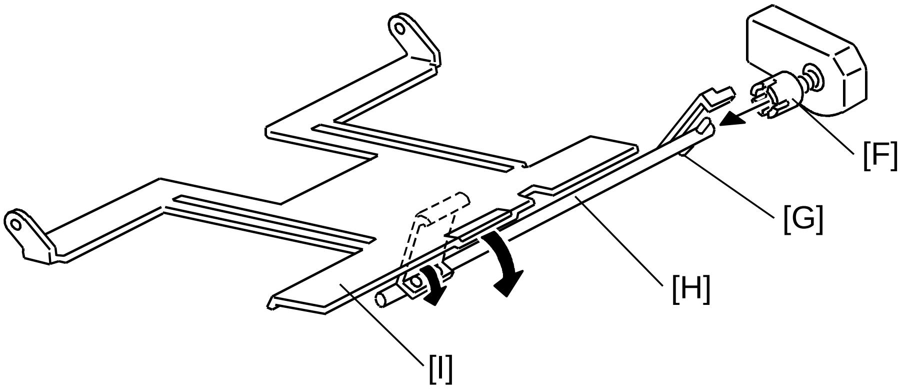


When the tray is set in the machine, the machine detects this condition by using several detection methods as shown in the table:

Feed station	A095 copier	A096 copier
1st	Tray set switch	Tray set signal through the connector
2nd	Paper size switch	Paper size switch
3rd	Tray set switch	LCT set signal through the connector

When the machine detects that the paper tray is set in the machine, the lift motor [A] rotates and the coupling gear [B] on the tray lift motor engages the pin [C] of the lift arm shaft [D], then turns the tray lift arm [E] to lift the tray bottom plate [F].



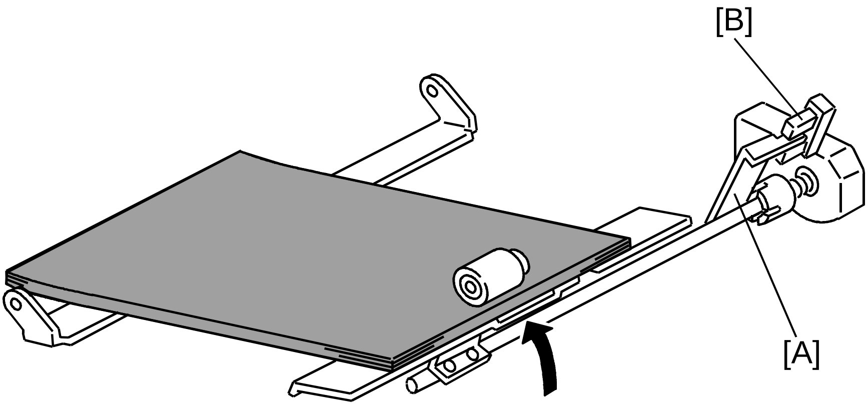


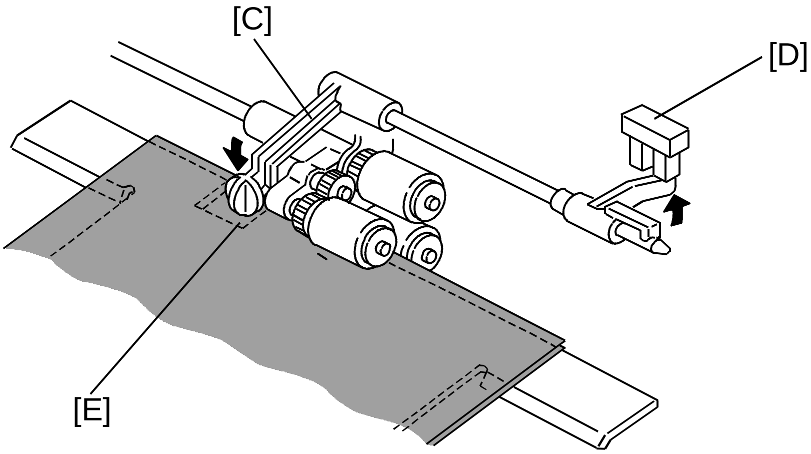
When the lift motor turns on, the pick-up solenoid [A] activates to lower the pick-up roller [B]. When the top sheet of paper reaches the proper paper feed level, the paper pushes up the pick-up roller and the actuator [C] on the pick-up roller supporter [D] activates the lift sensor [E] to stop the lift motor.

After several paper feeds, the paper level gradually lowers then the lift sensor is de-activated and the lift motor turns on again until the lift sensor is activated again.

When the tray is drawn out of the feed unit, the lift motor coupling gear [F] disengages the pin [G] of the lift arm shaft [H], then the tray bottom plate [I] drops.

6.9 PAPER NEAR END / PAPER END DETECTION



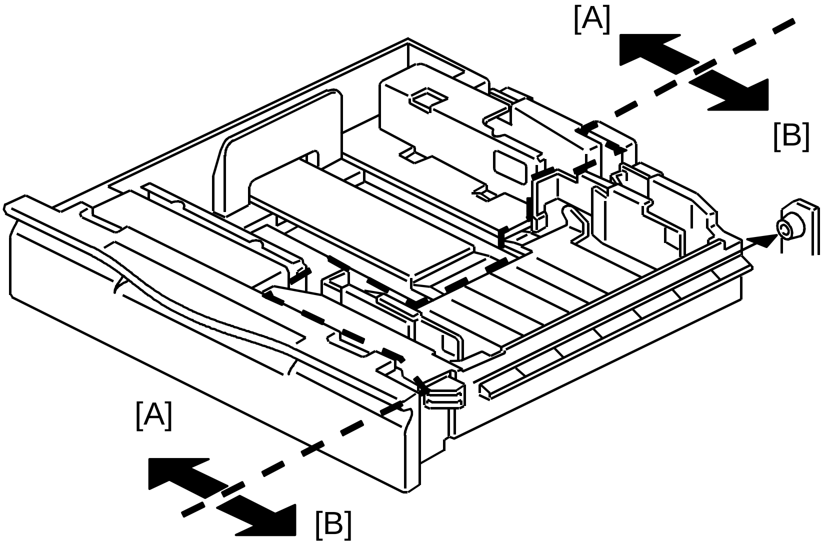


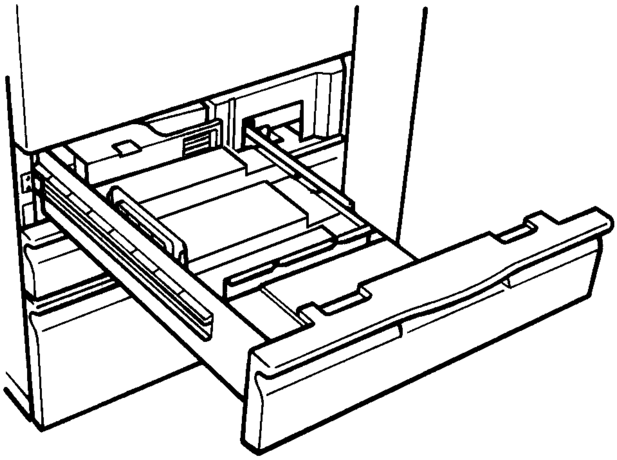
A feeler [A] on the lift arm shaft rotates counterclockwise in accordance with the change of the top paper level. When almost 50 sheets are left on the tray, the feeler activate the paper near end sensor [B] and informs the copier CPU of the paper near end condition.

If paper is loaded in the paper tray, the paper end feeler [C] is raised by the paper stack and the paper end sensor [D] is deactivated. When the paper tray runs out of paper, the paper end feeler drops in the cut out [E] of the tray bottom plate and the paper end sensor is activated.

6.10 TANDEM FEED TRAY (A096 COPIER ONLY)

6.10.1 OVERVIEW

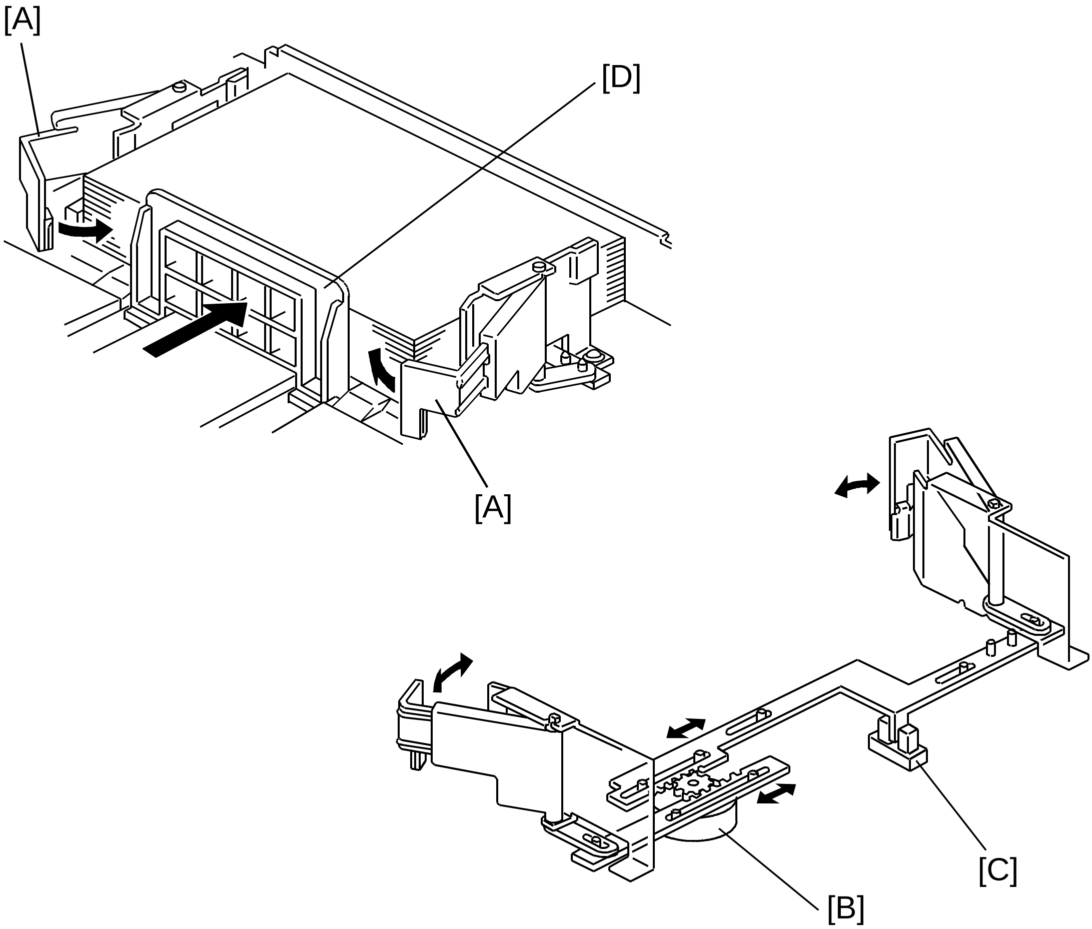




500 sheets of paper can be set in each of the left [A] and right trays [B]. Paper is fed from the right tray. When the paper in the right tray runs out, the paper in the left tray is automatically transported to the right tray. After the paper is transported to the right tray, paper feeding resumes.

Normally both the right and the left trays are joined together.
During copying, if there is no paper in the left tray, only the left tray can be pulled out to load paper, as shown. That time, paper feed continues.

6.10.2 Fences Drive Mechanism

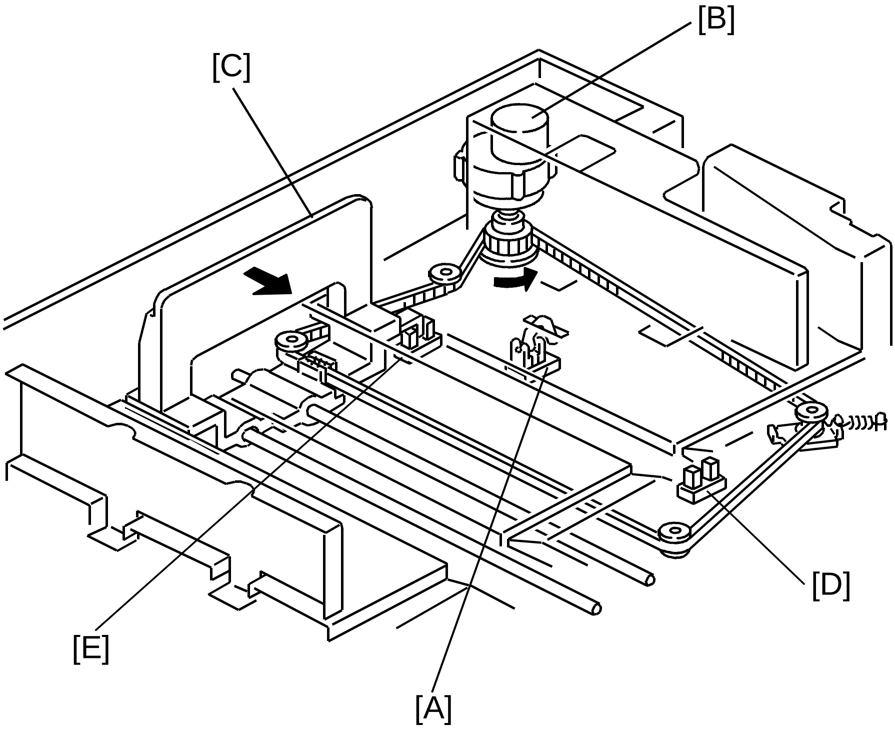


The side fences [A] of the right tray are normally closed. They open only when paper in the left tray is transported to the right tray.

The side fences are driven by the side fence drive motor [B] (stepping motor). When the paper loaded in the left tray is transported to the right tray, the side fence drive motor turns counterclockwise to open the side fences until the side fence positioning sensor [C] is activated.

When the rear fence [D] in the left tray pushes paper into the right tray, the side fence drive motor turns clockwise to close the side fences.

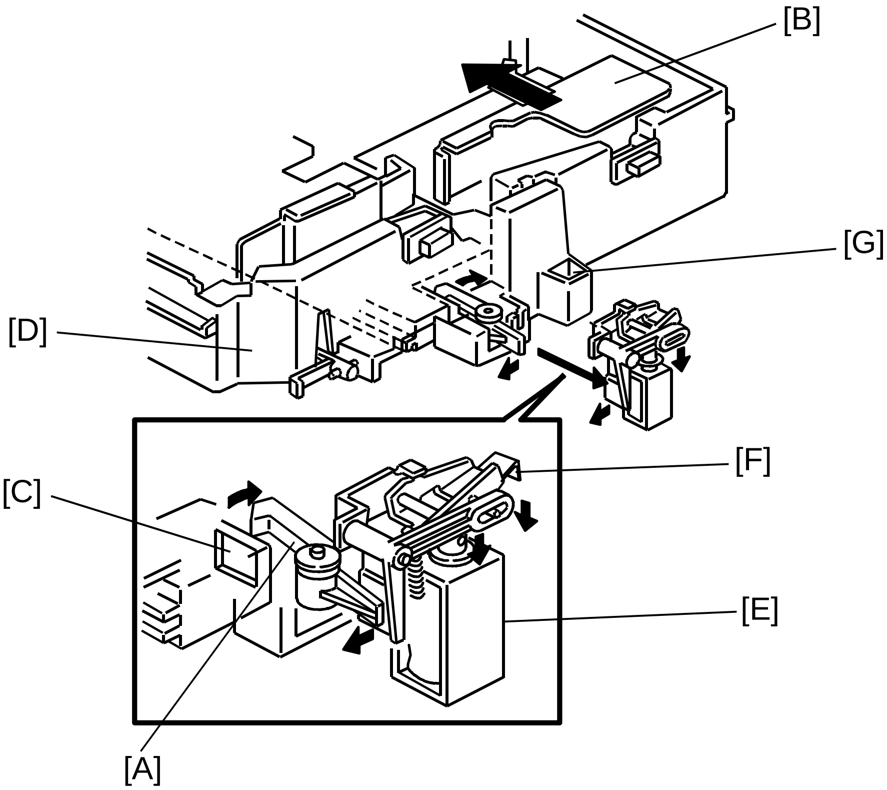
6.10.3 Rear Fence Drive Mechanism



When the paper end sensor [A] in the left tray detects paper and the paper end sensor in the right tray detects the paper end condition, the rear fence drive motor [B] (dc motor) in the left tray rotates counterclockwise to drive the rear fence [C] to push the paper into the right tray.

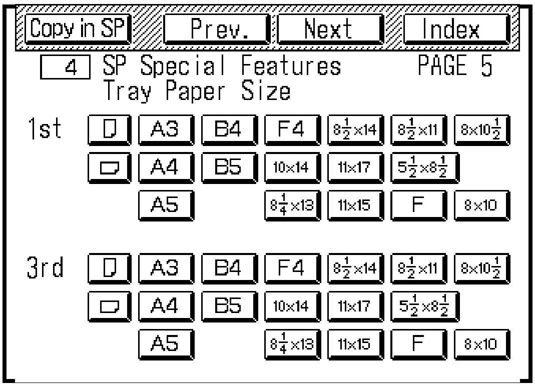
When the actuator on the rear fence activates the return position sensor [D], the rear fence drive motor rotates clockwise until the actuator activates the rear fence home position sensor [E].

6.10.4 Tray Lock Mechanism



Normally the left tray lock lever [A] in the right tray [B] fits in the hole [C] in the left tray [D]. During copying, if there is no paper in the left tray, the tray lock solenoid [E] turns on to release the tray lock lever so that the left tray can be separated from the right tray. The lock lever solenoid also lowers the right tray lock lever [F] to hook itself in the hole [G] on the right tray. Therefore, only the left tray is pulled out to load paper.

6.11 PAPER SIZE DETECTION


Copy in SP
Prev.
Next
Index

4 SP Special Features PAGE 5
Tray Paper Size

1st
A3
B4
F4
8½x14
8½x11
8x10½
A4
B5
10x14
11x17
5½x8½
A5
8¼x13
11x15
F
8x10
3rd
A3
B4
F4
8½x14
8½x11
8x10½
A4
B5
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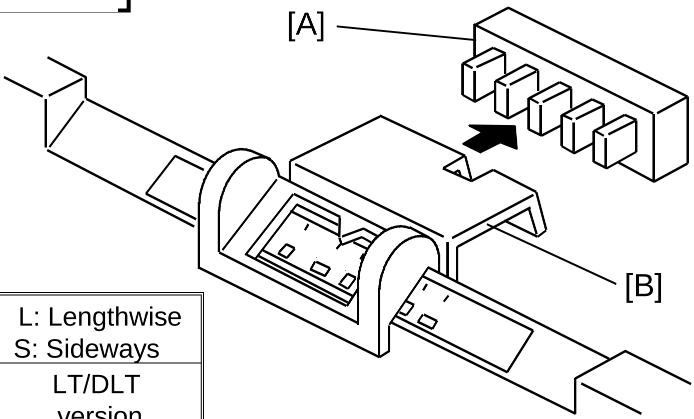
5½x8½
A5
8¼x13
11x15
F
8x10

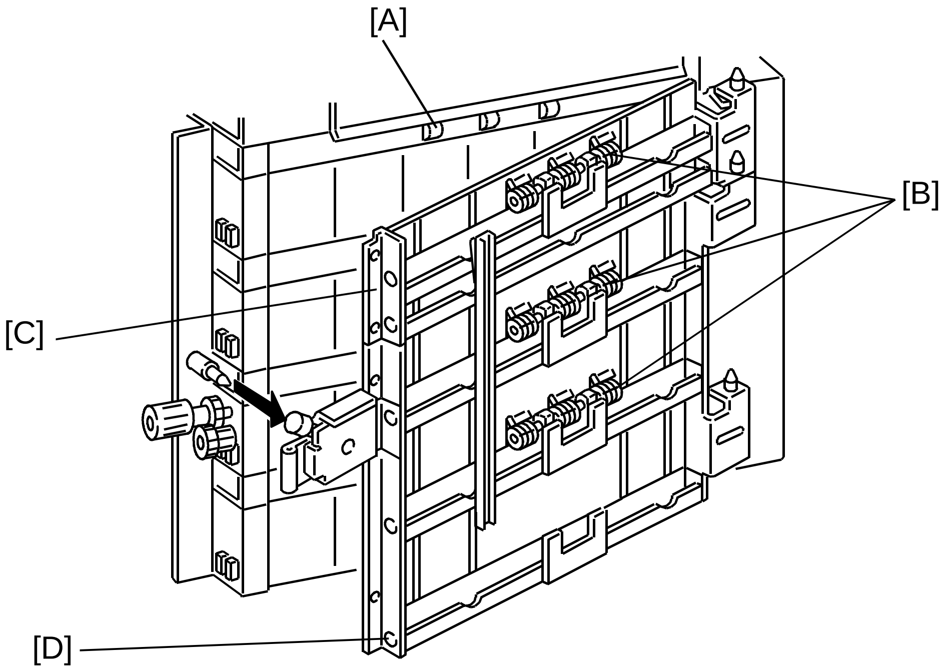


SW Actuate....0 De-actuate....1 1 2 3 4 5	Paper size	L: Lengthwise S: Sideways
	A4/A3 Version	LT/DLT version
01111	A3–L	11 x 17–L
00111	B4–L	8 1/2 x 14–L
10011	A4–L	8 1/2 x 11–L
01001	A4–S	8 1/2 x 11–S
00100	8 1/2 x 13	5 1/2 x 8 1/2–S
00010	–	8 x 10–S
00001	A5–S	8 x 10–L
10000	–	8 x 13–L
11000	–	10 x 14–L
11100	–	11 x 15–L
11110	A5–L	5 1/2 x 8 1/2–L

For the first and the third feed trays, the paper size is stored by using the SP mode (4 SP Special Feature – PAGE 5).

For the second feed tray (universal tray), the paper size switch [A] detects the paper size. The paper size switch has five microswitches inside. The paper size switch is actuated by an actuator plate [B] located on the rear of the tray. Each paper size has its own unique combination as shown in the table and the CPU judges the paper size by this combination of activated switches.

6.12 VERTICAL TRANSPORT MECHANISM

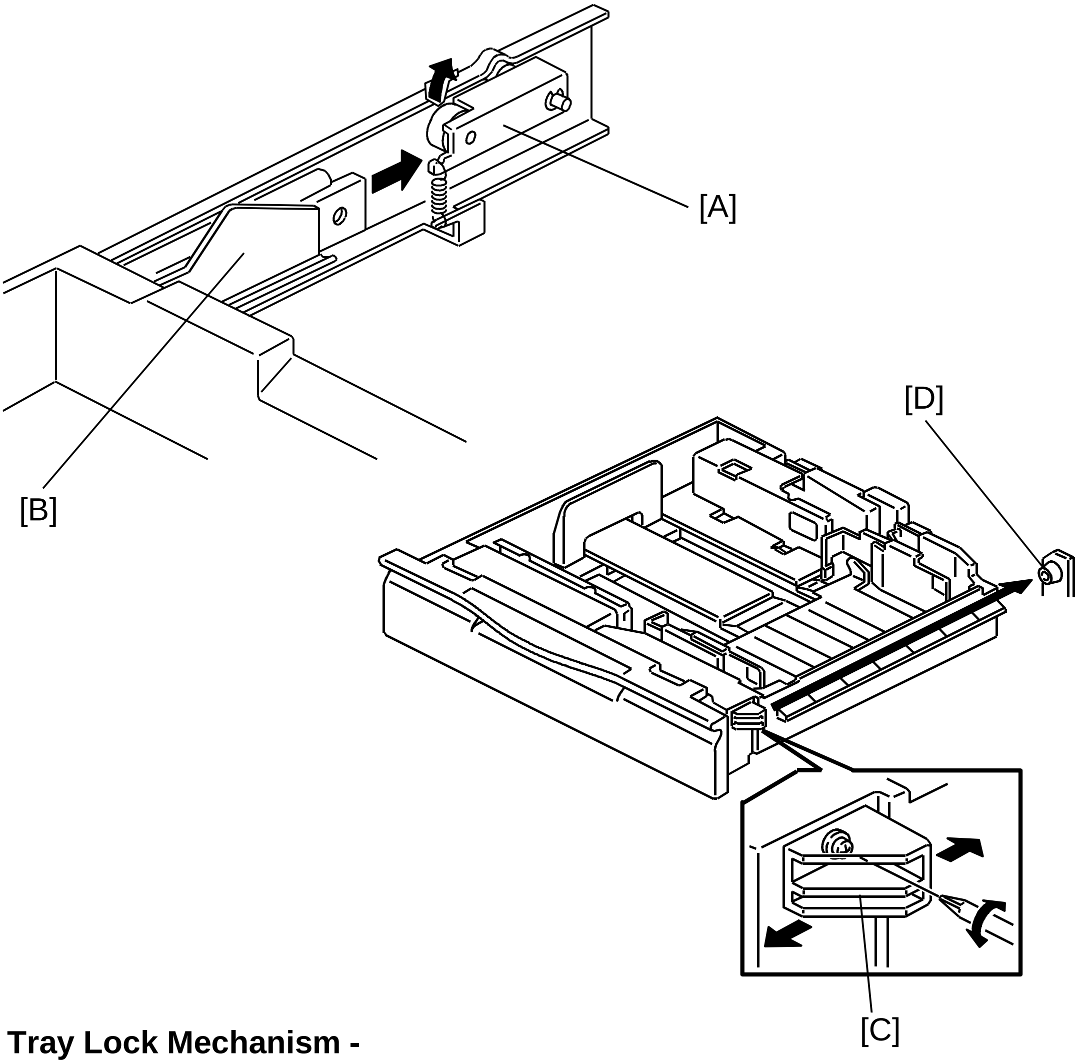


The vertical transport rollers [A] in each feed unit is driven by the paper feed motor. The vertical transport rollers and the driven vertical transport rollers [B], on the upper and the lower vertical guide plates, transport the paper from each feed unit to the registration roller.

The upper [C] and lower [D] vertical transport guides can be opened to access jammed paper in the vertical transport area.
The lower vertical transport guide separates from the upper guide to gain wider jam removal space.

To reduce the first copy time, the paper feed motor rotates at a quicker speed (430mm/sec.) than normal (330mm/sec). This quick rotation is performed only in the case of the first copy from the first feed station.

6.13 TRAY POSITIONING MECHANISM

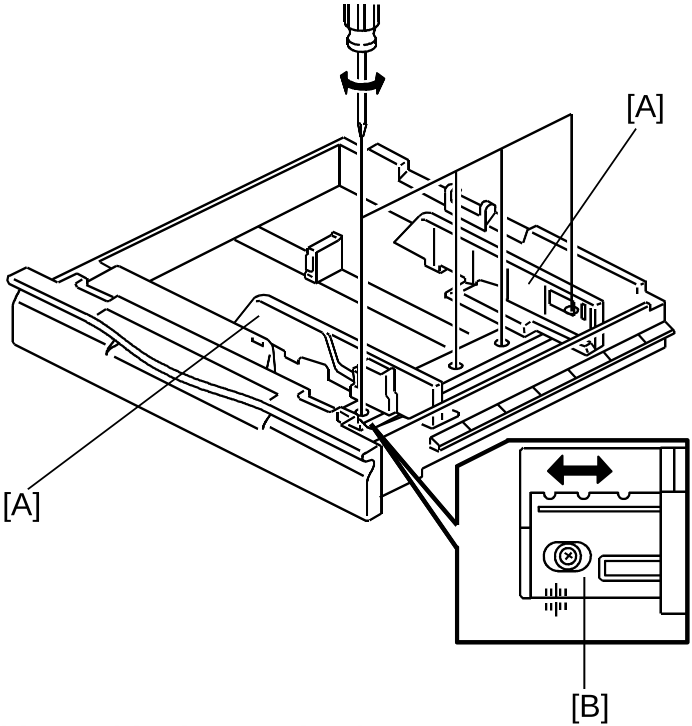


- Tray Lock Mechanism -

When the feed tray is set in the paper feed unit, the lock lever [A] drops behind the lock plate [B] on the Accuride support bracket to lock the tray in the proper position.

- Side-to-side Positioning Mechanism (1st and 3rd feed tray for A096 copier)-

When the feed tray is set in the paper feed unit, the side-to-side positioning plate [C] presses the feed tray against the rubber stopper [D]. By moving the positioning plate, the tray position can be changed to adjust the side-to-side registration.



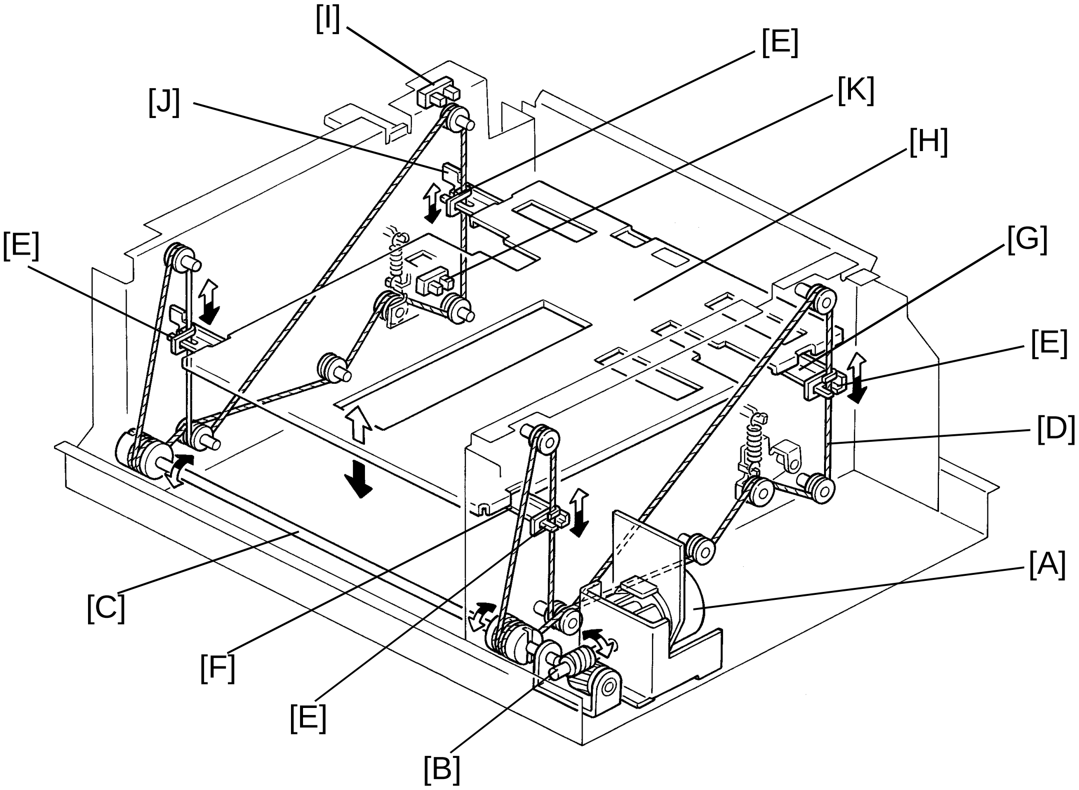
- Side-to-side Positioning Mechanism -

(All feed trays for the A095 copier and 2nd feed tray for the A096 copier)

Side plates [A] are fixed on the positioning plate [B]. By moving the positioning plate (fixed by four screws), the paper position can be changed to adjust the side-to-side registration.

6.14 BUILT IN LCT

6.14.1 Paper Tray Lift Mechanism



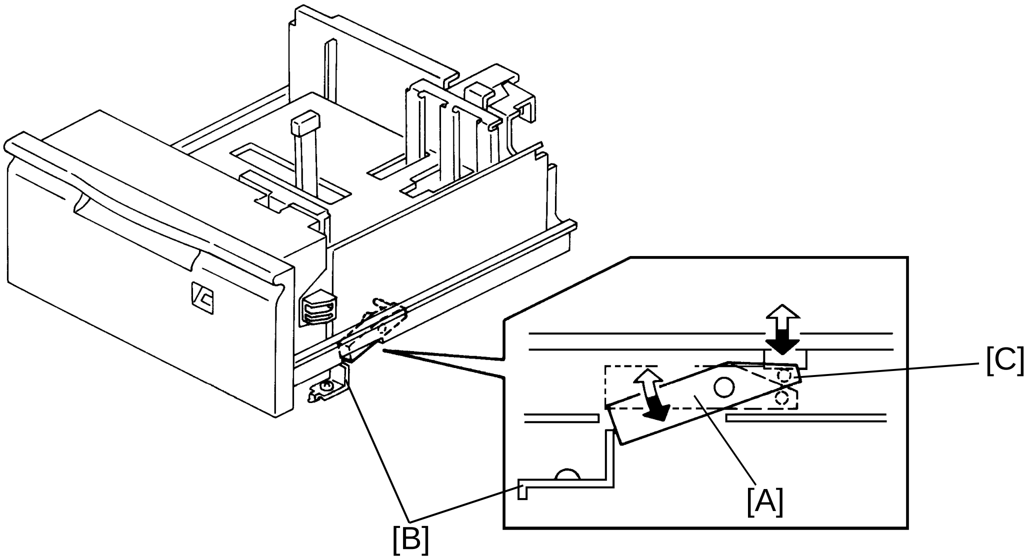
Drive from the reversible LCT motor [A] is transmitted through a worm gear [B] to the drive pulley shaft [C]. The tray wires [D] are fixed in the slots [E] at the ends of the tray support rods [F] and [G].

When the LCT motor rotates forward and the drive pulley shaft [C] turns counterclockwise, the tray support rods and the tray bottom plate [H] move upward. The tray goes up until the top paper pushes up the pick-up roller and the lift sensor in the third feed unit is activated.

The paper near end sensor [I] detects the paper near end condition when it is activated by the actuator [J] on the rear end of the right support rod [G].

To lower the tray bottom plate [H], the LCT motor rotates in reverse and the drive pulley shaft [C] turns clockwise, the tray support rods and the tray bottom plate move downward. The tray goes down until the tray down sensor [K] is activated by the actuator.

6.14.2 Tray Lock Mechanism

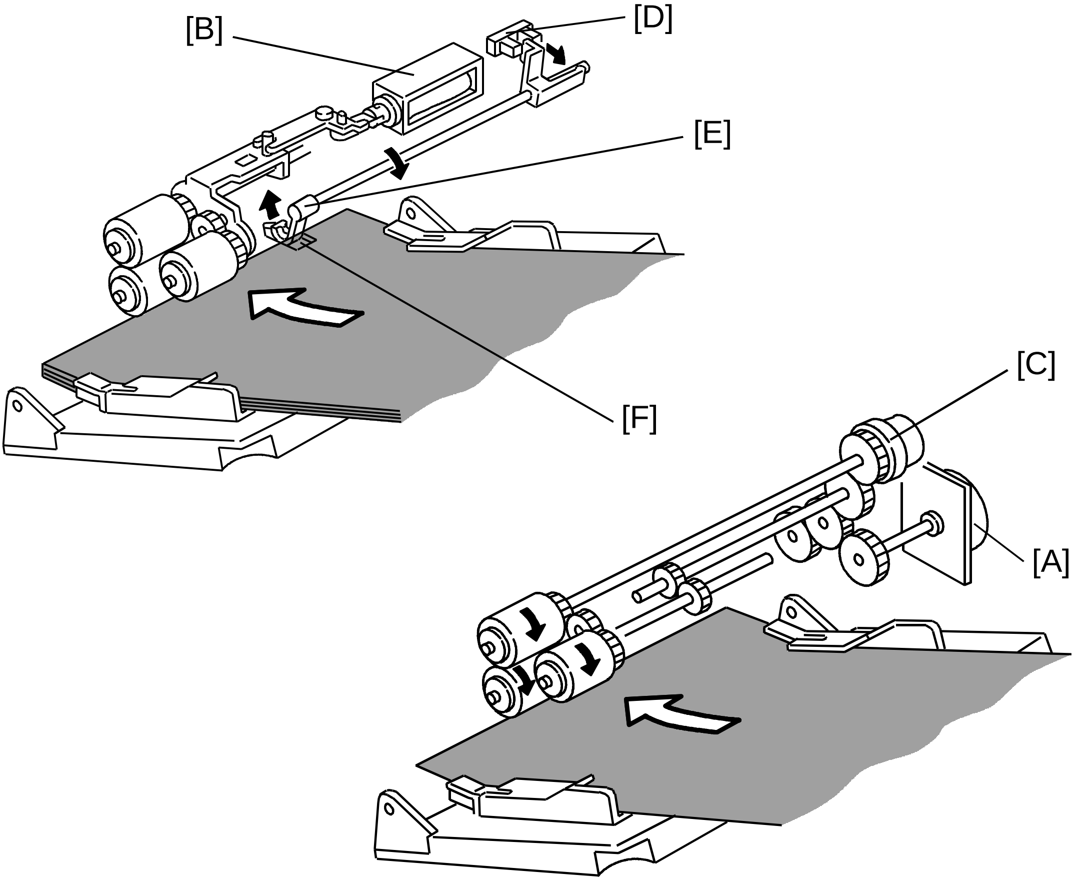


When the tray starts moving up, the tray lock lever [A] drops in the hole on the base plate to engage the stopper [B], locking the tray in position. This prevents the tray from being pulled out while in the up position.

When the bottom plate is lowered to the bottom position, the bottom plate presses down the pin [C] on the lock lever. The opposite end of the lever then moves up, allowing the tray to be pulled out.

6.15 BY-PASS FEED TABLE

6.15.1 Feed Mechanism / Paper End Detection

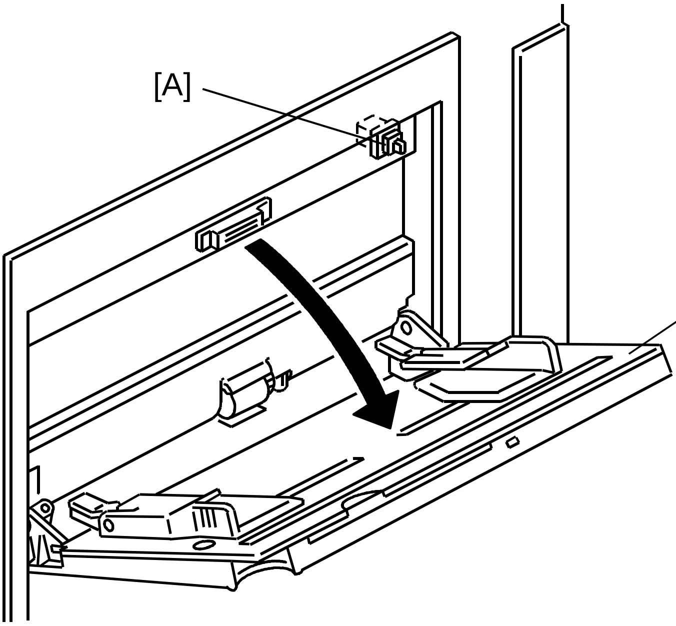


The by-pass feed table uses the FRR feed system. The by-pass feed motor [A], pick-up solenoid [B], and by-pass feed clutch [C] control paper feeding from the by-pass feed table.

The by-pass paper end sensor [D] detects if there is paper on the by-pass feed table.

When there is no paper on the by-pass feed table, the paper end feeler [E] drops in the cut out [F] of the lower guide plate and the paper end sensor [D] deactivates. When paper is present on the by-pass feed table, the paper pushes up the end feeler [E] to activate the paper end sensor [D]. The CPU turns off the paper end indicator on the LCD panel and turns the start key from red to green.

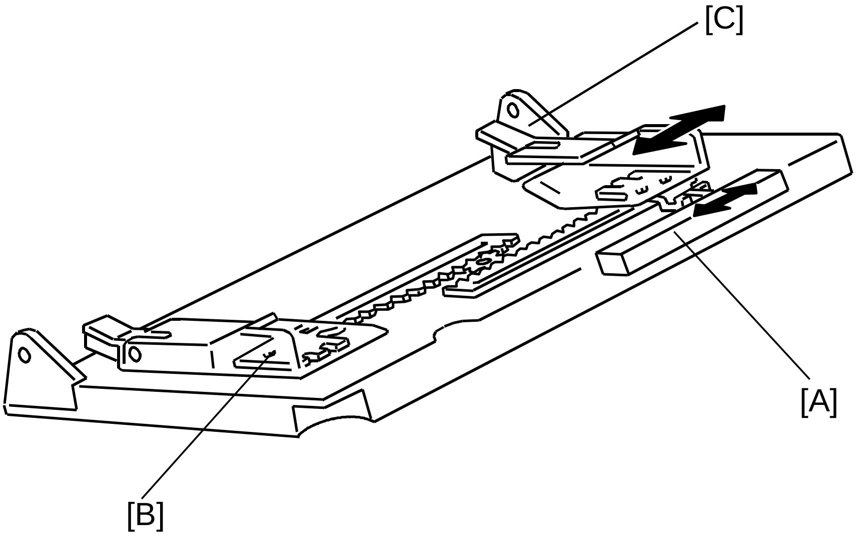
6.15.2 Table Open/Close Detection



When the by-pass feed table is opened, the by-pass table switch [A] is activated by part of the feed table [B]. Then the CPU turns on the by-pass feed indicator on the operation panel.

On this model, opening the by-pass feed table does not shift the copier into interrupt mode. The selected modes and input data before opening the by-pass feed table remain. Also other paper trays can be selected while the by-pass feed table is open.

6.15.3 Paper Size Detection

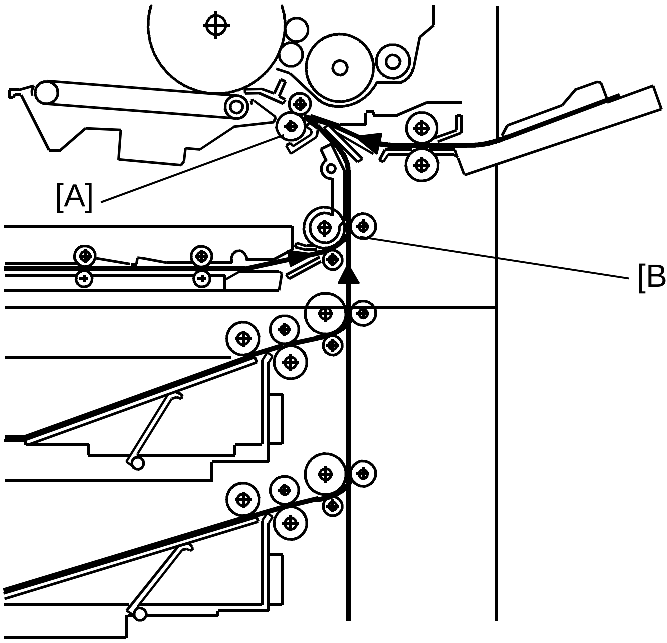


The paper width detection is necessary to decide the lens horizontal position because the standard position of the optics (rear left corner) and the paper (center) is different.

The by-pass paper size sensor [A] (variable resistor) monitors the paper width. When the paper side fences [B] and [C] are positioned according to the paper width, the rear side fence is connected to the lever of the by-pass paper size sensor. The electrical resistance of the sensor changes in accordance with the side fence position, This informs the CPU of the paper width.

At the first copy from the by-pass feed table, the scanner makes a full distance scan. The registration sensor monitors the length of this paper (between the ON timing by the leading edge and the OFF timing by the trailing edge). From the following copies, the copier is controlled according to this paper length data.

6.16 PAPER REGISTRATION

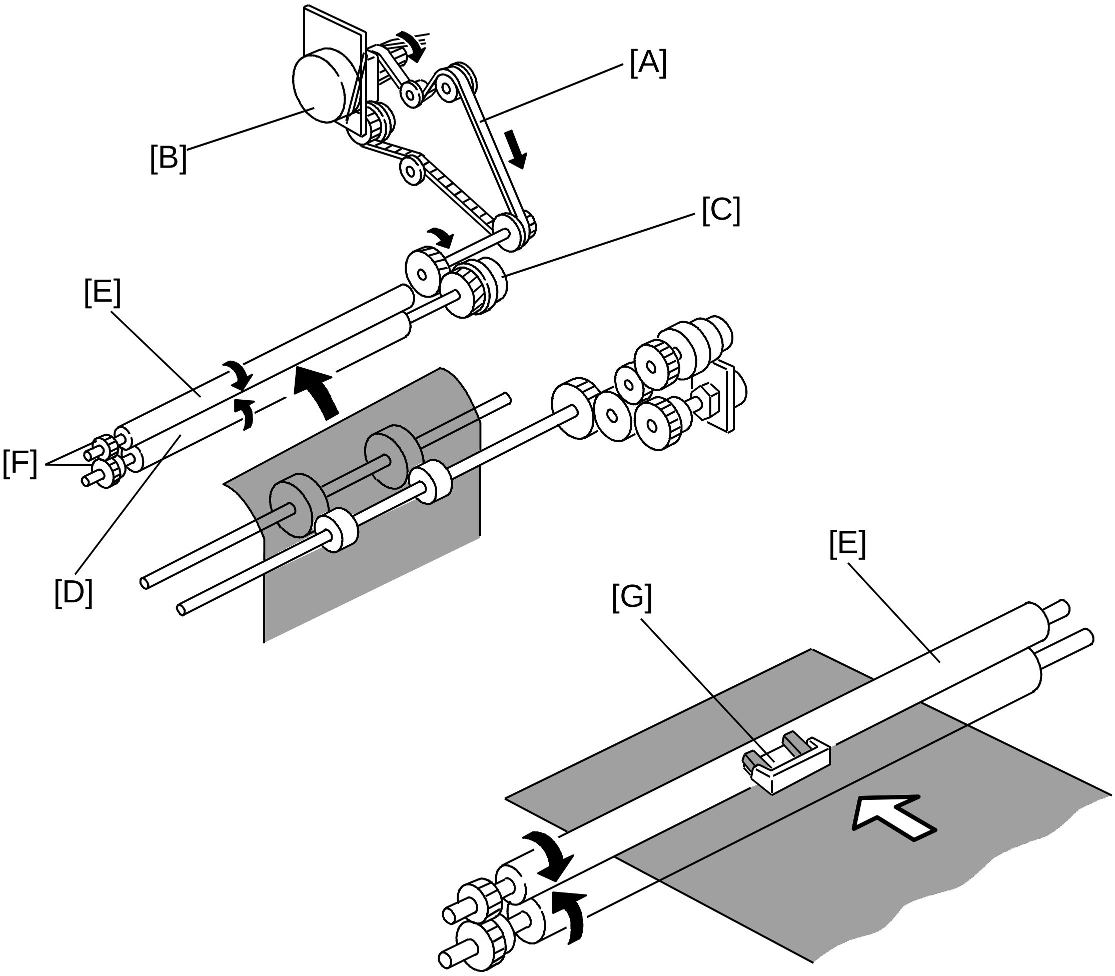


The registration rollers [A] have two functions. One is aligning the lead edge of the paper with the leading edge of the latent image on the OPC drum. When the CPU receives the signal from the registration sensor, the registration clutch turns on. It turns off 90ms after the trailing edge of the paper is detected by the registration sensor.

The other function is to correct skewing of paper fed from the trays. When the leading edge of the paper reaches the registration rollers, the vertical transport rollers [B] continuously turn to transport the paper. On the other hand, the registration roller is not turning. The leading edge of the paper is pushed against the registration roller. This makes a little buckle on the paper between the vertical transport rollers and the registration rollers to correct paper skew.

Shortly after the leading edge of the paper reaches the registration roller, the registration clutch activates to feed the paper.

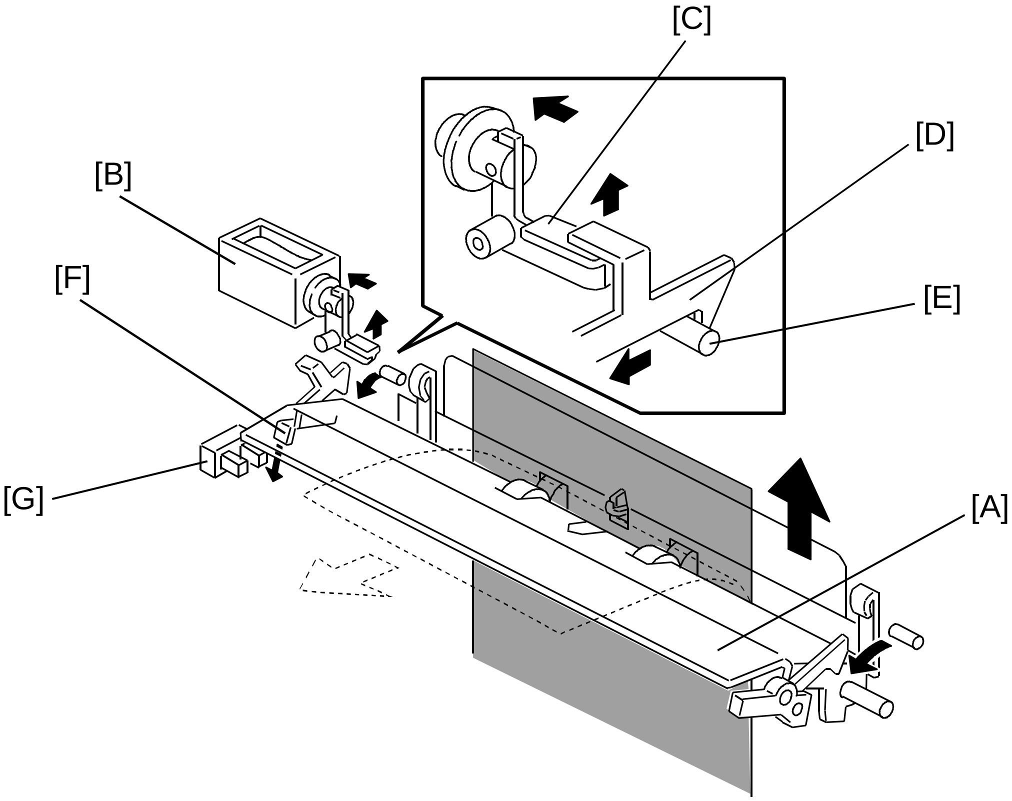
6.17 REGISTRATION DRIVE MECHANISM



Through the timing belt [A], main motor [B] rotation is transmitted to the registration clutch [C]. When the registration clutch activates, the main motor drive is transmitted to the lower registration roller [D], then to the upper registration roller [E] via two gears [F] at the front side.

A paper dust cleaner [G] is located at the center of the upper registration roller [E]. This is in line with the feed rollers where most paper dust is generated.

6.18 GUIDE PLATE RELEASE MECHANISM



When a paper misfeed occurs between the vertical transport rollers and the registration rollers, the lower paper guide plate [A] automatically opens.

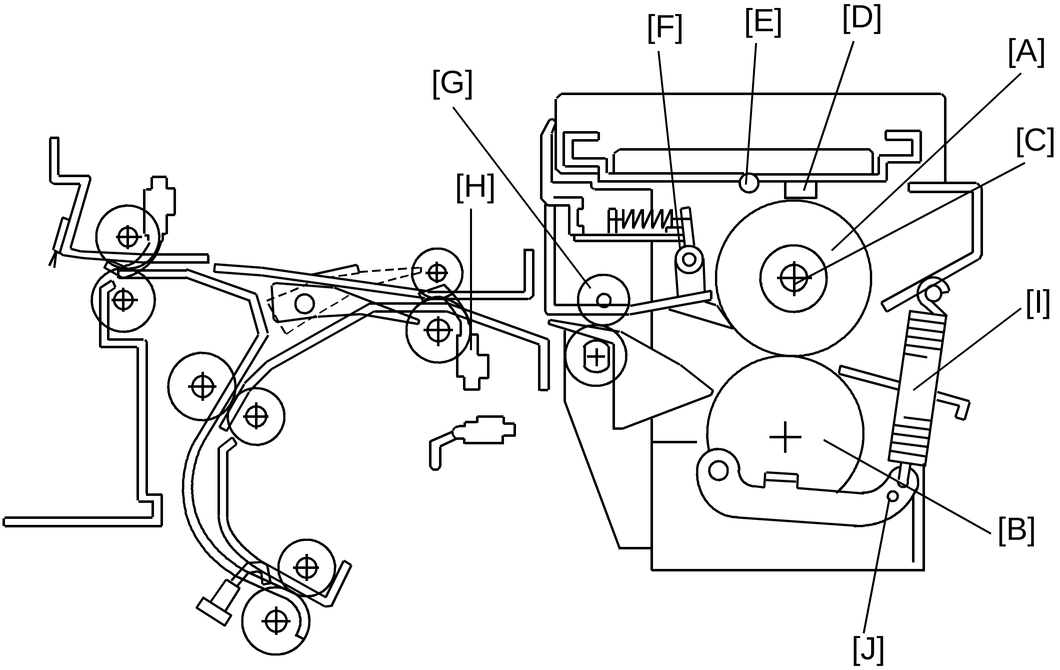
When the registration sensor is not activated at a certain jam check timing, the guide plate solenoid [B] turns on. The lever [C] raises the lock lever [D] on the guide plate to release the pin [E] on the rear side frame. Then, the guide plate falls open.

The actuator [F] on the guide plate activates the guide plate position sensor [G] when the guide plate opens.

To prevent the guide plate from being left open, if the guide plate position sensor is activated, copying is prohibited and a caution guidance is displayed on the LCD panel.

7. IMAGE FUSING

7.1 OVERVIEW



After the image is transferred, the copy paper enters the fusing unit. Then the image is fused to the copy paper by a heat and pressure process through the use of a hot roller [A] and pressure roller [B].

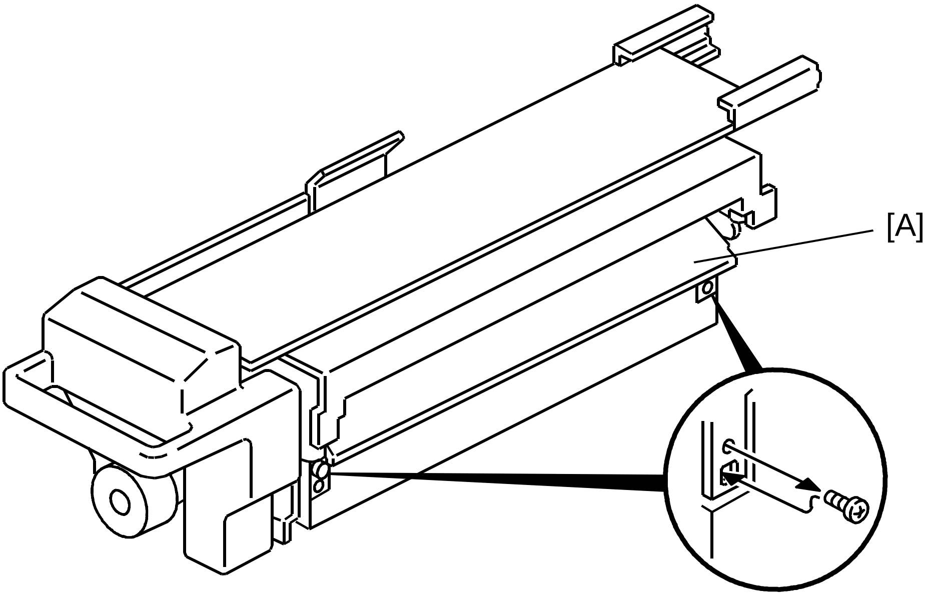
The fusing lamp [C] located inside the hot roller is turned on and off to maintain the operating temperature of 185°C. The CPU monitors the hot roller surface temperature through a thermistor [D] which is in contact with the hot roller’s surface. A thermofuse [E] protects the fusing unit form overheating.

This model uses an oilless hot roller system and does not have a hot roller cleaning mechanism.

The hot roller strippers [F] separate the copy paper from the hot roller and direct it to the fusing exit rollers [G]. The exit sensor [H] monitors the progress of the copy paper through the fusing unit and acts as a misfeed detector while the exit rollers drive the copy paper to the inverter section.

The hook positions of the tension springs [I] on the pressure lever [J] adjusts the roller pressure.

7.2 FUSING ENTRANCE GUIDE



The entrance guide [A] for this machine is adjustable for thick or thin paper.

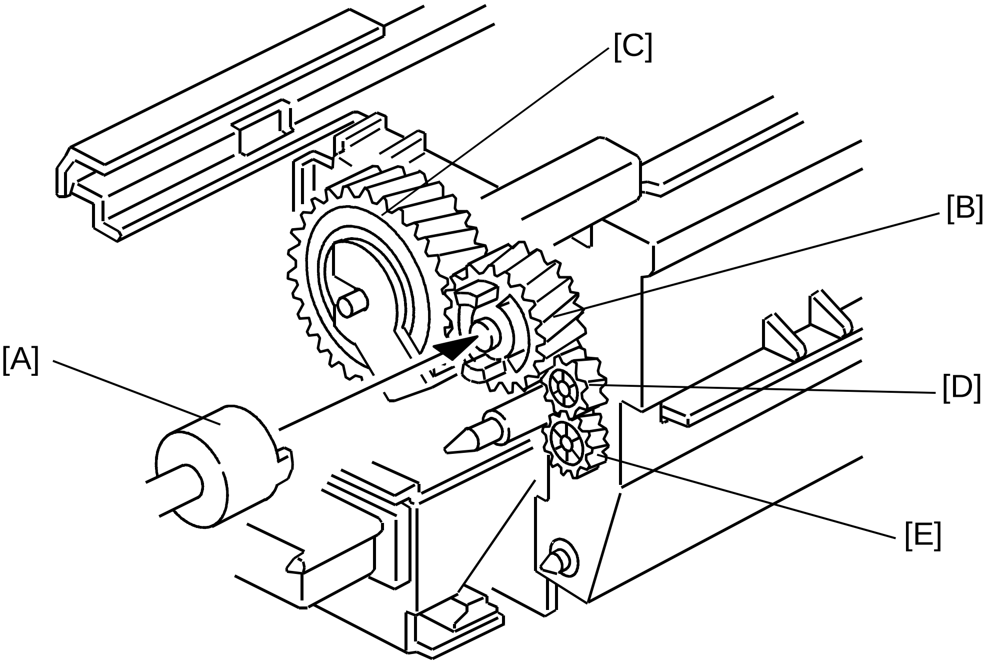
With thin paper, set the entrance guide in the upper position. This slightly lengthens the paper path which prevents the paper from creasing in the fusing unit. With thick paper, set the entrance guide in the lower position.

This is because thick paper does not bend as easily, and is therefore less prone to creasing. Also, the lower setting allows more direct access to the gap between the hot and pressure rollers. This prevents thick paper from buckling against the hot roller, which can cause blurring at the leading edge of the copy.

In this model, the transfer belt improves paper transport and the paper path to the fusing entrance is stabilized. This reduces the chance of paper creasing due to paper skews in the fusing unit.

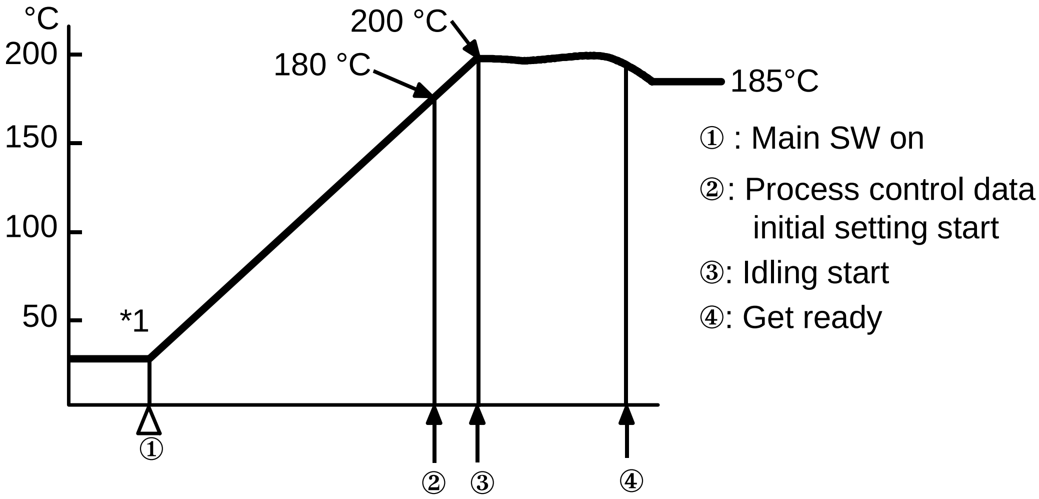
Therefore, the guide plate standard position is the lower position. (Standard position on previous models was the upper position).
Since there are very few reasons to change the guide plate position, there is no guide plate position adjustment lever for customer use.

7.3 FUSING DRIVE MECHANISM



The fusing drive gear [A] transmits the drive from the fusing/duplex drive motor to the gear [B] which drives the hot roller gear [C]. Rotation passes from the gear [B] through the idle gear [D] to the exit roller drive gear [E]. The pressure roller is driven by the friction between the two fusing rollers.

7.4 FUSING LAMP CONTROL



When the main switch is turned on the CPU starts sending a trigger pulse to the fusing control circuit to turn on the fusing lamp.

When the CPU detects a fusing temperature of 200°C through the thermistor, the copier starts fusing idling. This idling period can be adjusted by SP mode ($\boxed{1}$ SP Adjustment: PAGE 1). When the fusing idling finishes, the warm-up period is completed and the Ready indicator turns on. After this, fusing temperature is controlled at 185°C. If the fusing temperature is above 100°C when the main switch is turned on, the copier does not go into the fusing idling mode.

When the fusing temperature reaches 180°C (in the case that the main switch is turned on while the fusing temperature is less than 100°C), the machine starts the process control data initial setting.

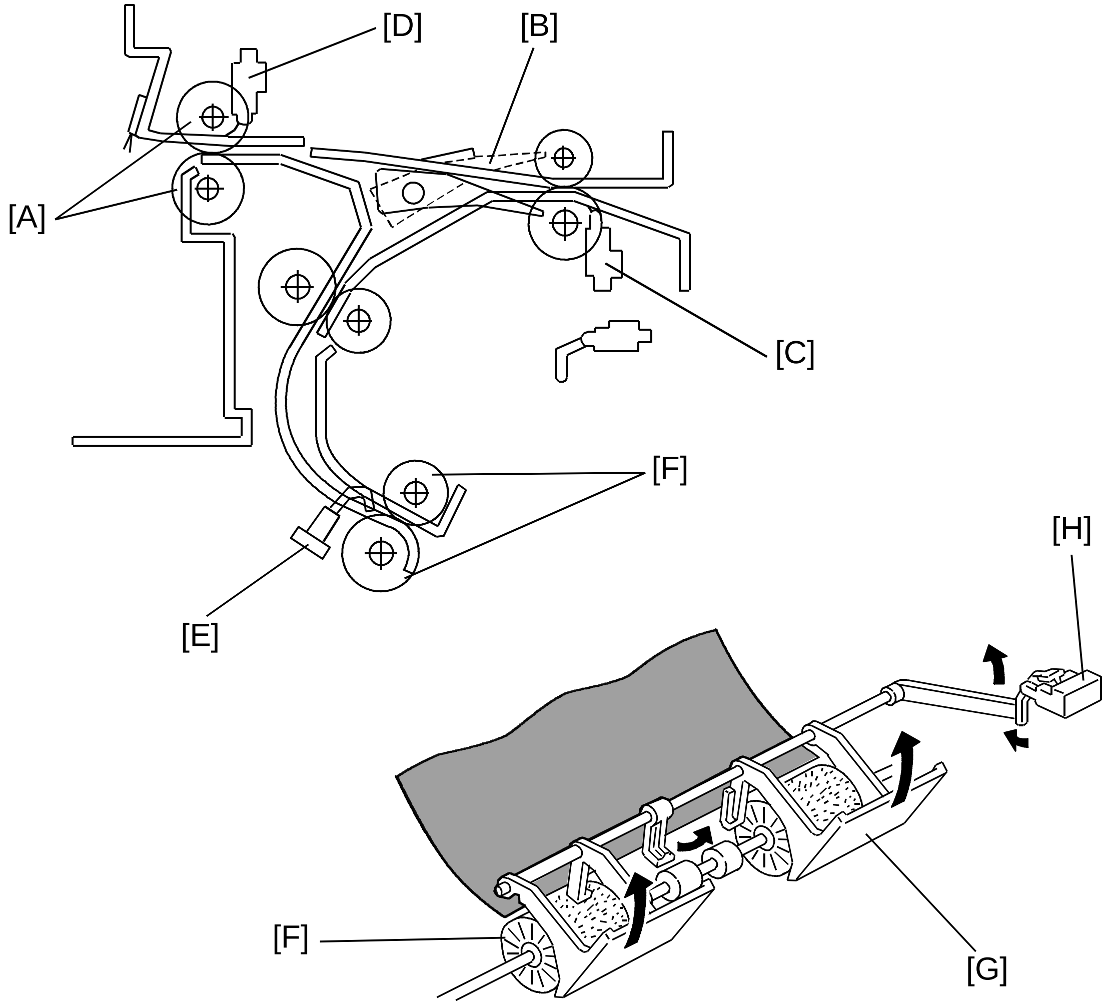
The CPU also changes the fusing lamp on period at every check cycle. The change is calculated according to the result of the previous check. This keeps the fusing temperature as close as possible to the target temperature.

If the fusing lamp (950 W) is turned on or off while the exposure lamp is on, the power supplied to the exposure lamp may fluctuate, possibly degrading the copy image. To prevent this, the fusing lamp does not change while the exposure lamp is on: it stays either on or off.

The standard fusing temperature control mode is:
On-off control.......European version
Phase control......Other versions

By cutting the JP501 on the optics control board, the control mode become to the another mode.

7.5 INVERTER AND PAPER EXIT

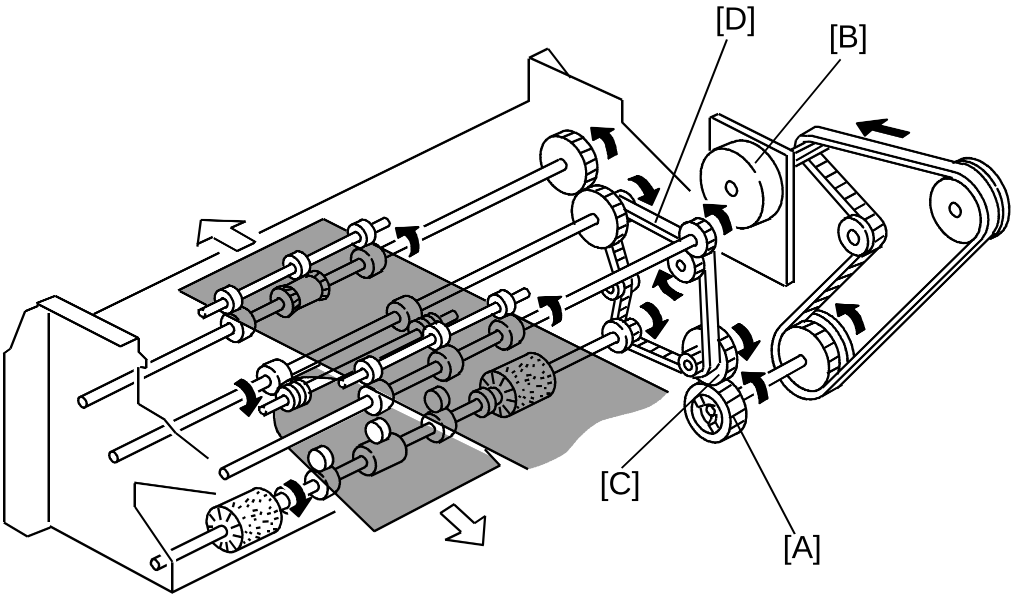


After passing the fusing unit, copies enter the inverter unit where paper is distributed to the paper exit rollers [A] or the duplex unit.
The junction gate solenoid changes the position of the junction gate [B]. In duplex mode, the junction gate solenoid turns on to raise the junction gate so that the junction gate guides the paper into the duplex unit.
The fusing exit sensor [C] and exit sensor [D] monitor paper misfeeds.

The duplex transport sensor [E] is used not only to monitor paper misfeed detection, but also to activate the duplex jogger motor.

When the paper passes the duplex transport roller [F], the paper pushes the paper guide [G] up, and the actuator on the rear end of the paper guide shaft de-activates the paper guide sensor [H]. The duplex entrance sensor monitors paper misfeeds.

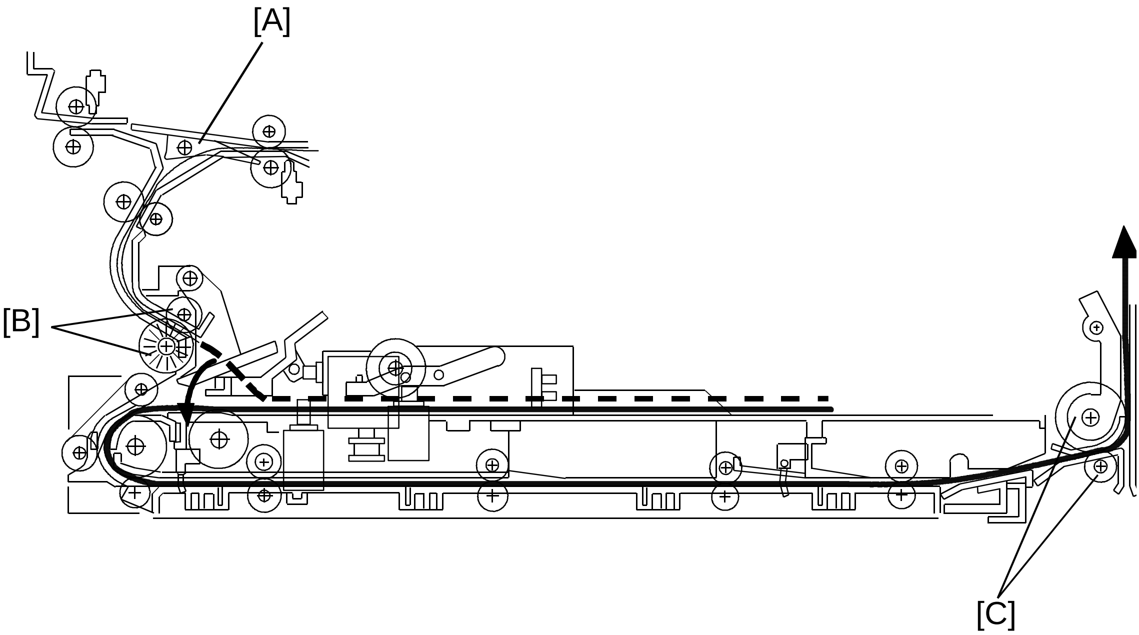
7.6 INVERTER AND EXIT DRIVE MECHANISM



The gear [A] transmits the drive from the fusing/duplex drive motor [B] to the next gear [C]. This gear [C] transmits the drive to the paper exit and the inverter section through the timing belt [D].

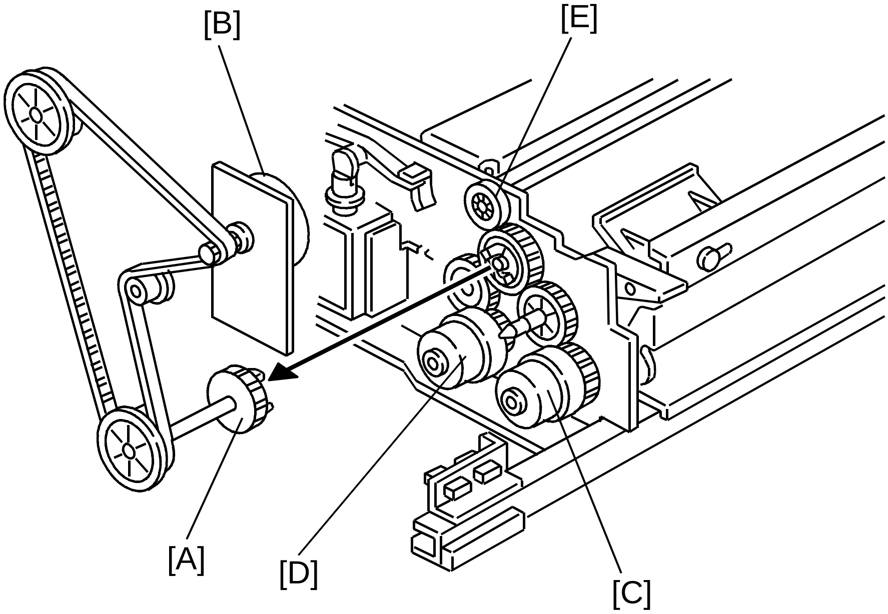
8. DUPLEX

8.1 OVERVIEW



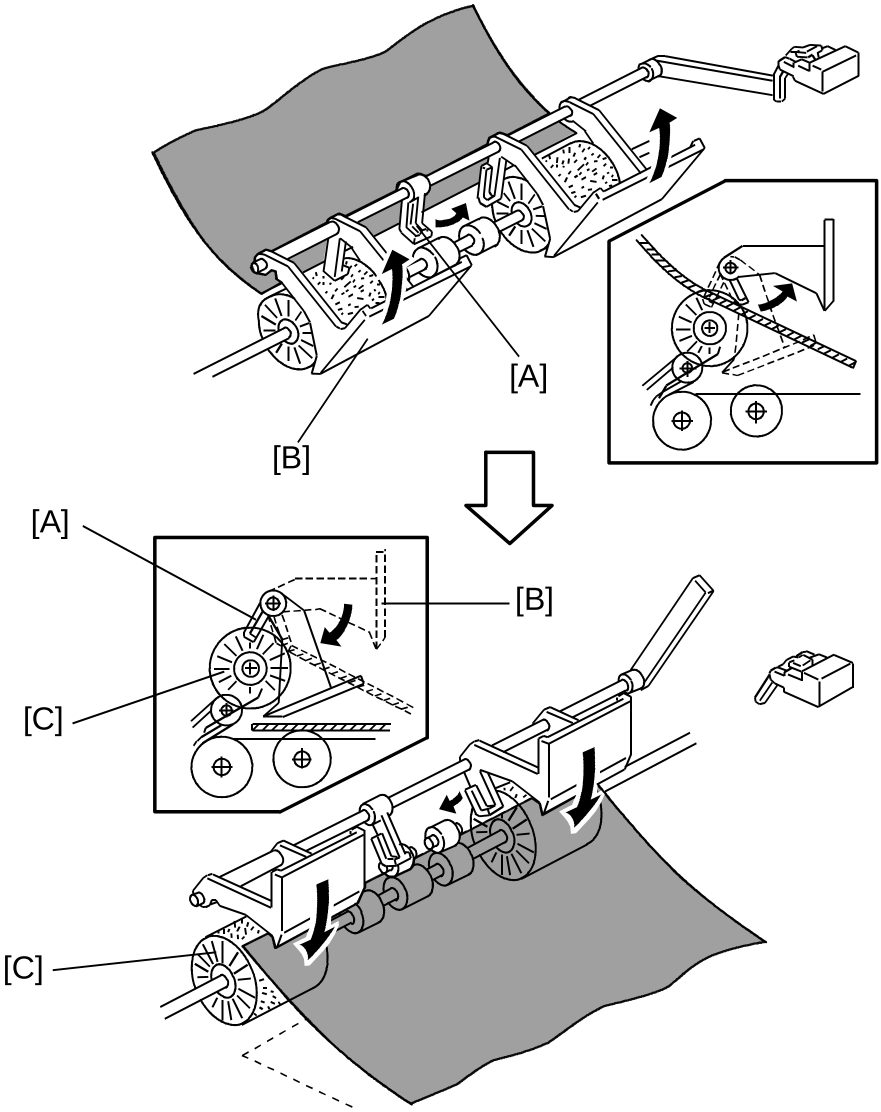
In this mode the junction gate [A] directs sheets exiting the fusing unit to the duplex tray entrance. After that, all sheets follow the path through the entrance rollers [B]. After all front side copying is completed, the sheets follow (the sheets on the duplex tray are fed in order from the bottom to the top) the path through the duplex feed mechanism and vertical transport rollers [C] to the registration rollers.

8.2 DRIVE MECHANISM



The duplex drive gear [A] transmits drive from the fusing/duplex drive motor [B] to the duplex unit. This drive is transmitted to the duplex paper feed section under the control of the duplex feed clutch [C] and transmitted to the duplex transport section under the control of the duplex transport clutch [D]. The duplex pick-up roller is driven by the gear [E], so this roller continuously rotates while the fusing/duplex drive motor is on.

8.3 DUPLEX ENTRANCE TO DUPLEX TRAY

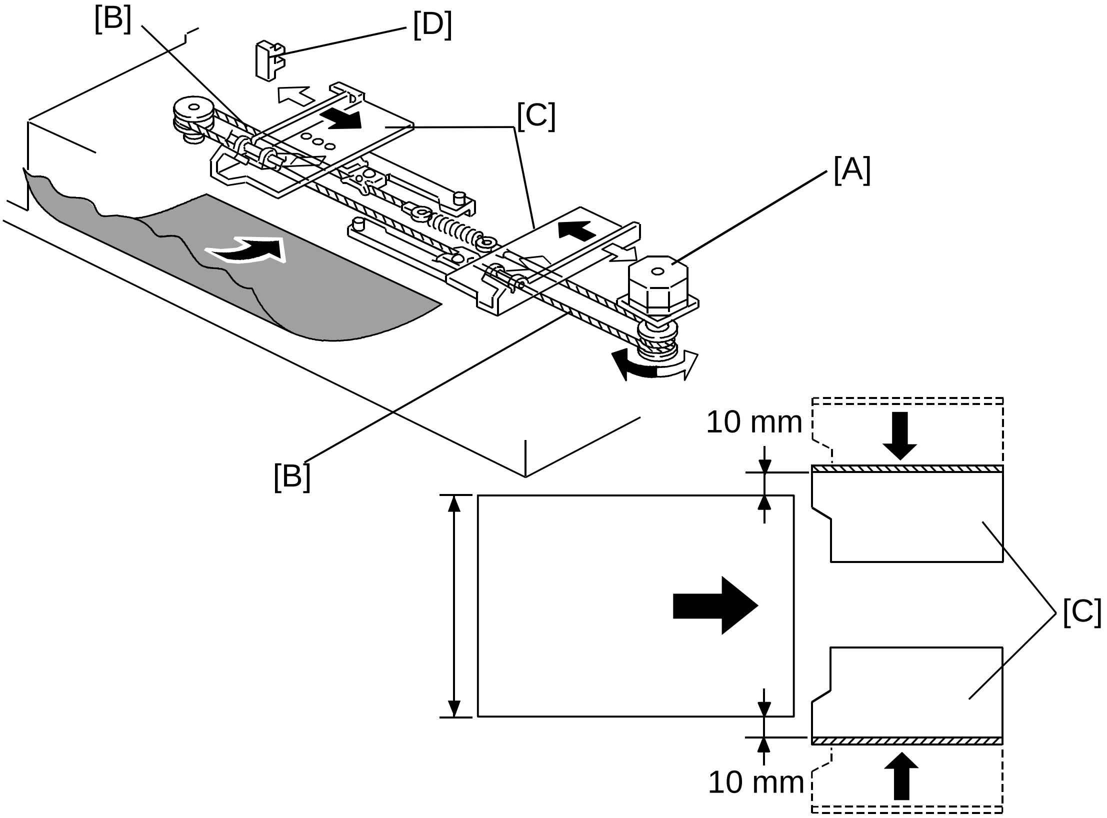


After paper passes through the junction gate, it pushes the feeler [A] up. The feeler and the paper guide [B] form one part, so that when it is pushed up, the paper guide is moved out of the paper path.

The paper then enters the duplex unit. After the paper's trailing edge passes the feeler, nothing holds it up and the paper guide falls into place and is ready to guide the paper under brush roller.

(If the paper is caught on top of the brush roller [C], the guide pushes it under as it falls.)

8.4 DUPLEX STACKING



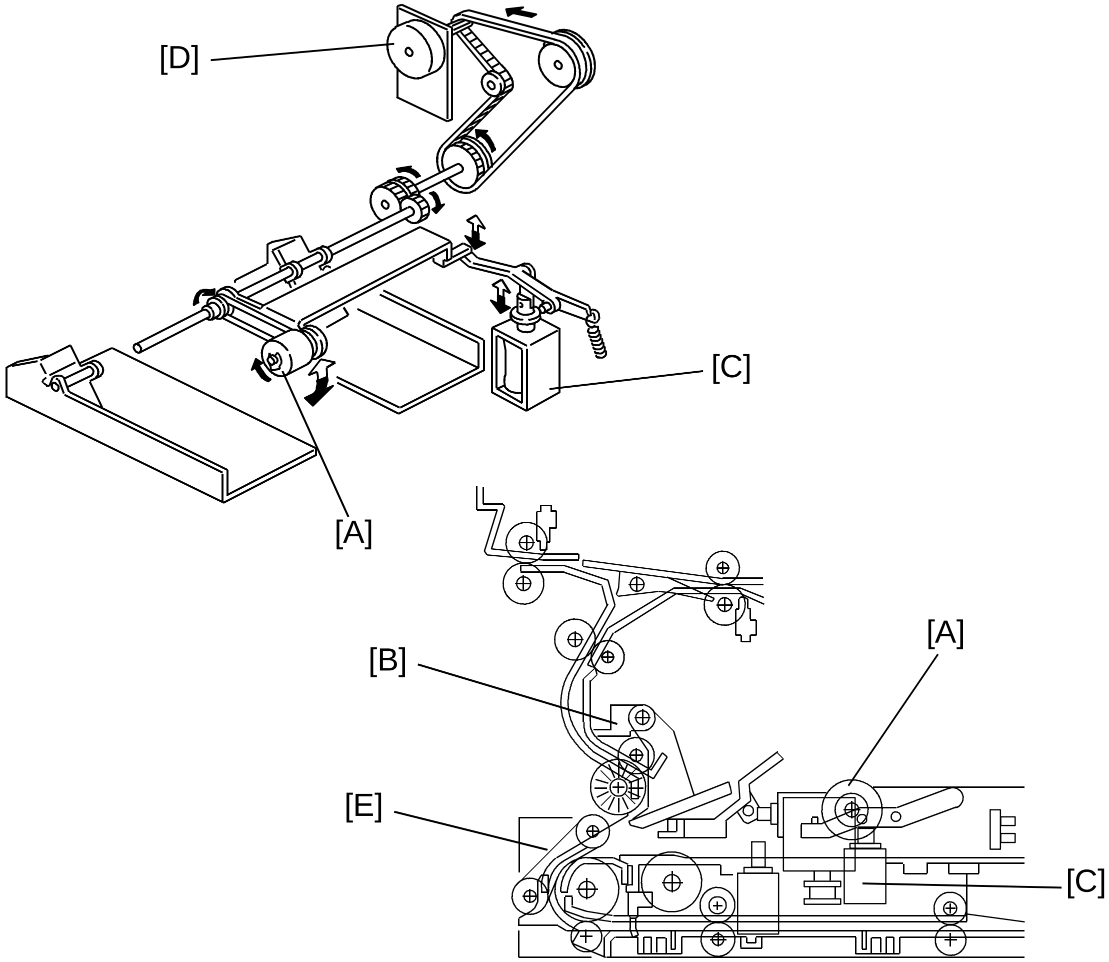
The jogger motor (stepping motor) [A] drives the side fence drive wire [B] to move the side fences [C] inward or outward.

When the main switch is turned on, the jogger motor rotates to place the jogger fences at the home position by monitoring the signal of the jogger home position sensor [D].

When the start key is pressed, the jogger motor rotates to position the side fences according to the selected paper size. 30 ms after the duplex transport sensor detects the leading edge of the paper (OFF → ON), the jogger motor rotates to position the jogger side fences 10 mm away from the selected paper size. When the copy paper is delivered in the duplex tray, actually 150 ms after the duplex transport sensor detects the trailing edge of the paper (ON → OFF), the jogger fences move inward to square the paper. 30 ms after the duplex transport sensor detects the leading edge of the next copy paper, the jogger fences move back to the previous positions (10 mm away from the paper size) again.

The jogger fences move inward to square the paper stack for every copy paper stack at the same timing as before. After the last copy of the first side copying enters the duplex tray, the jogger fences remain against the paper stack.

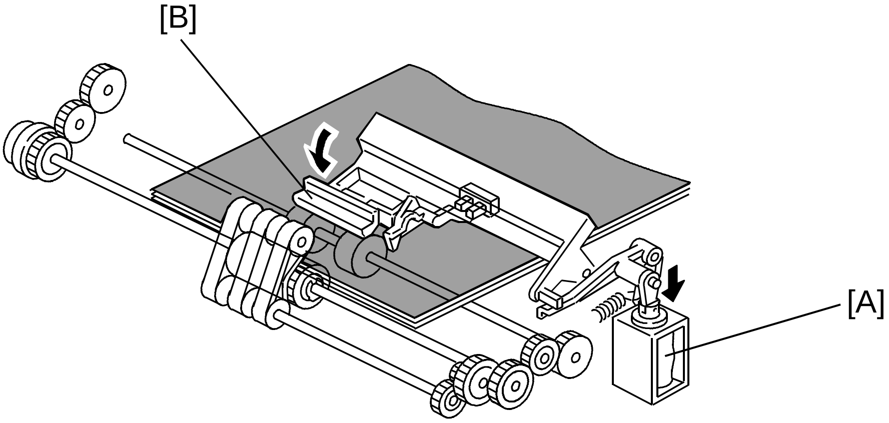
8.5 DUPLEX PICK-UP ROLLER MECHANISM

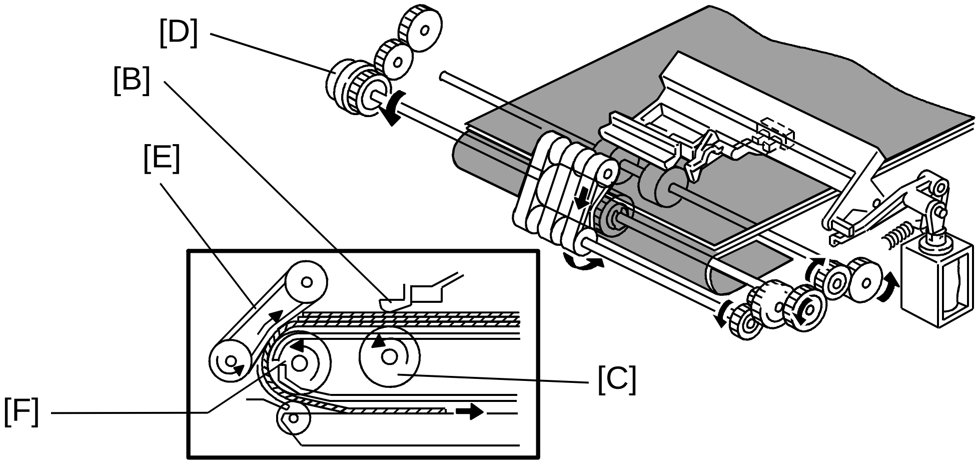


The positioning roller [A] is basically in the upper position. 150ms after the duplex transport sensor [B] detects the trailing edge of the paper (ON → OFF), the positioning solenoid [C] turns on to lower the positioning roller until it contacts the paper. The positioning roller continuously rotates clockwise while the fusing/duplex motor [D] rotates. The positioning solenoid turns on until the leading edge of the paper hits the separation belts [E].

30ms after the duplex transport sensor [B] detects the leading edge (OFF → ON) of the next paper, the positioning roller solenoid turns off to raise the positioning roller so that the positioning roller does not disturb the next paper as it enters.

8.6 DUPLEX PAPER FEED



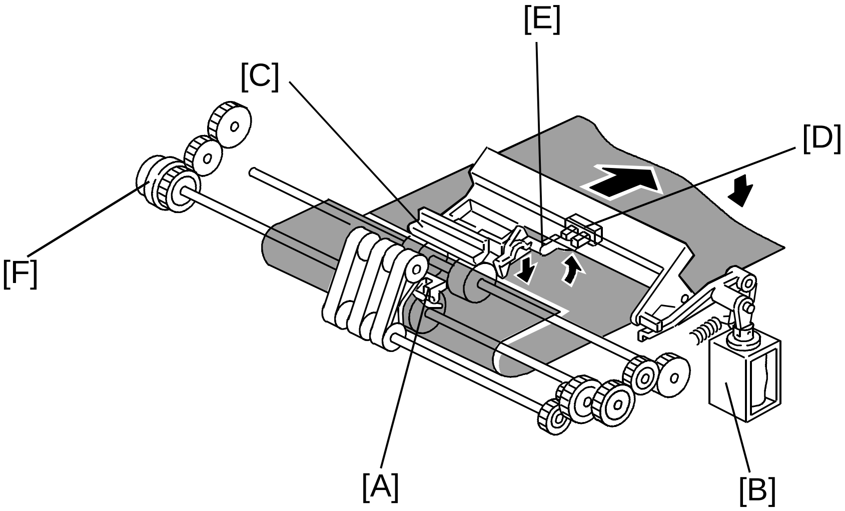


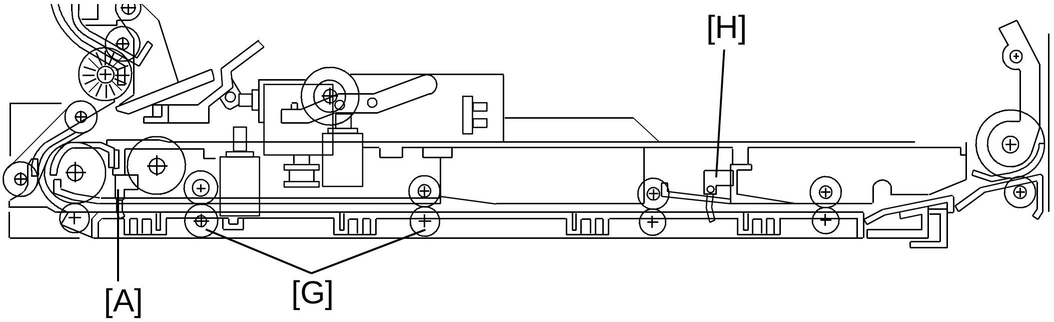
The paper on the duplex tray is fed in order from the bottom to the top sheet.

After all copies are stacked on the duplex tray, the duplex pressure solenoid [A] turns on to lower the pressure arm [B] so that the pressure arm presses the paper against the pick up roller [C].

Then, the paper feed clutch [D] turns on to rotate the pick-up roller [C], separation belts [E] and the feed roller [F].

The separation belts [E] and the feed roller [F] rotate in opposite directions. Only the bottom paper is fed because the separation belt prevents any other paper from feeding.
The feed roller advances the bottom paper past the separation belts because the force of the feed roller is greater than the resistance of the separation belts. The separation belts prevent multiple feeds because the resistance of the separation belt is greater than the friction between the papers.





When the duplex entrance sensor [A] detects the trailing edge of the last paper, the pressure solenoid [B] turns off to raise the pressure arm [C]. At this moment, the duplex paper end sensor [D] confirms that no paper remains on the duplex tray.

The paper end actuator [E] is located on the pressure arm and moves with the pressure arm.

The paper end sensor is de-activated (the actuator interrupts the photosensor) only when the pressure arm is in the lower position (solenoid [B] is on) and no paper is present on the duplex tray.

200ms after the duplex entrance sensor [A] detects the leading edge of the paper, the duplex feed clutch [F] turns off and the paper is transported by the duplex transport rollers [G].

When the paper activates the duplex exit sensor [H], the duplex transport clutch [F] turns off and the paper waits there until the feed timing is adjusted to match the registration clutch on timing of the previous paper.

SECTION 3

INSTALLATION

1. INSTALLATION REQUIREMENTS

1.1 ENVIRONMENT

1. Temperature Range: 10°C to 30°C (50°F to 86°F)
2. Humidity Range: 15% to 90% RH
3. Ambient Illumination: Less than 1,500 lux (Do not expose to direct sunlight.)
4. Ventilation: Room air should turn over at least 3 times/hour.)
5. Ambient Dust: Less than 0.15 mg/m^3 (4 x 10^3 Oz/yd^3)
6. Room Size: More than 10 m^3 (13.4 yd^3)
7. If the place of installation is air-conditioned or heated, do not place the machine.
   a) where it will be subjected to sudden temperature changes.
   b) where it will be directly exposed to cool air from an air conditioner.
   c) where it will be directly exposed to heat from a heater.
8. Do not place the machine where it will be exposed to corrosive gasses.
9. Do not install the machine at any location over 2,000 m (6,500 feet) above sea level.
10. Place the copier on a strong and level base.
11. Do not place the machine where it may be subjected to strong vibrations.

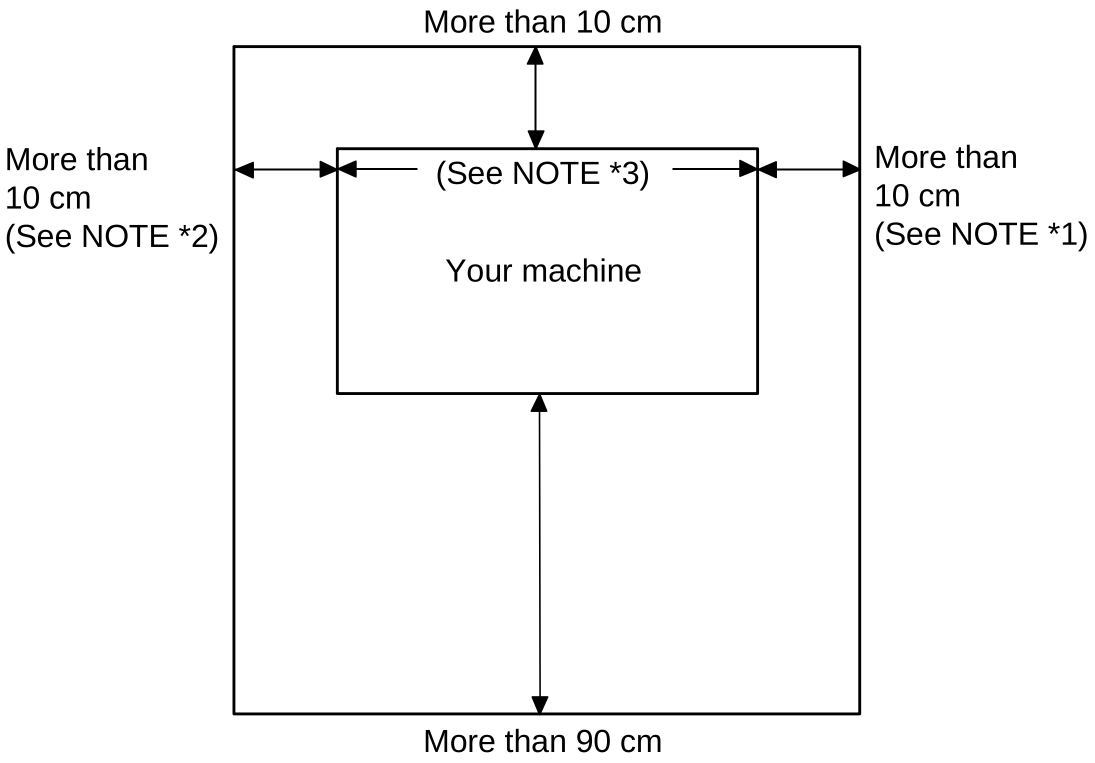
1.2 MACHINE LEVEL

1. Front to back: Within 5 mm (0.2") of level
2. Right to left: Within 5 mm (0.2") of level

NOTE: The machine legs may be screwed up or down in order to level the machine. Set a carpenter’s level on the exposure glass.

1.3 MINIMUM SPACE REQUIREMENTS

Place the copier near the power source, providing clearance as shown:


More than 10 cm
More than 10 cm (See NOTE *2)
(See NOTE *3)
More than 10 cm (See NOTE *1)
Your machine
More than 90 cm

NOTE: *1. If the LCT is not installed, the distance between the wall and the edge of the by-pass feed table must be more than 30 cm.

*2. If the A374 sorter stapler is installed, the distance must be more than 20 cm.

*3. Copier only: 128.0 cm (with LCT 134.7 cm)
Copier + A374 S/S: 110.0 cm (with LCT 142.2 cm)
Copier + A377 S/S: 125.6 cm (with LCT 156.8 cm)
Copier + Finisher: 136.1 cm (with LCT 167.3 cm)

1.4 POWER REQUIREMENTS

1. Input voltage level: 120 V/60 Hz: More than 20 A
   220 ~ 240 V, 50/60 Hz: More than 10 A

2. Permissible voltage fluctuation: 10%

3. Permissible extension cord:
   At least 300 V/30 A capacity and less than 5 m (16.4 feet) long.

   NOTE: a) be sure to ground the machine. (Do not ground it to a gas pipe.)
   b) Make sure the plug is firmly inserted in the outlet.
   c) Avoid multi-wiring.

4. Do not set anything on the power cord.

2. COPIER INSTALLATION

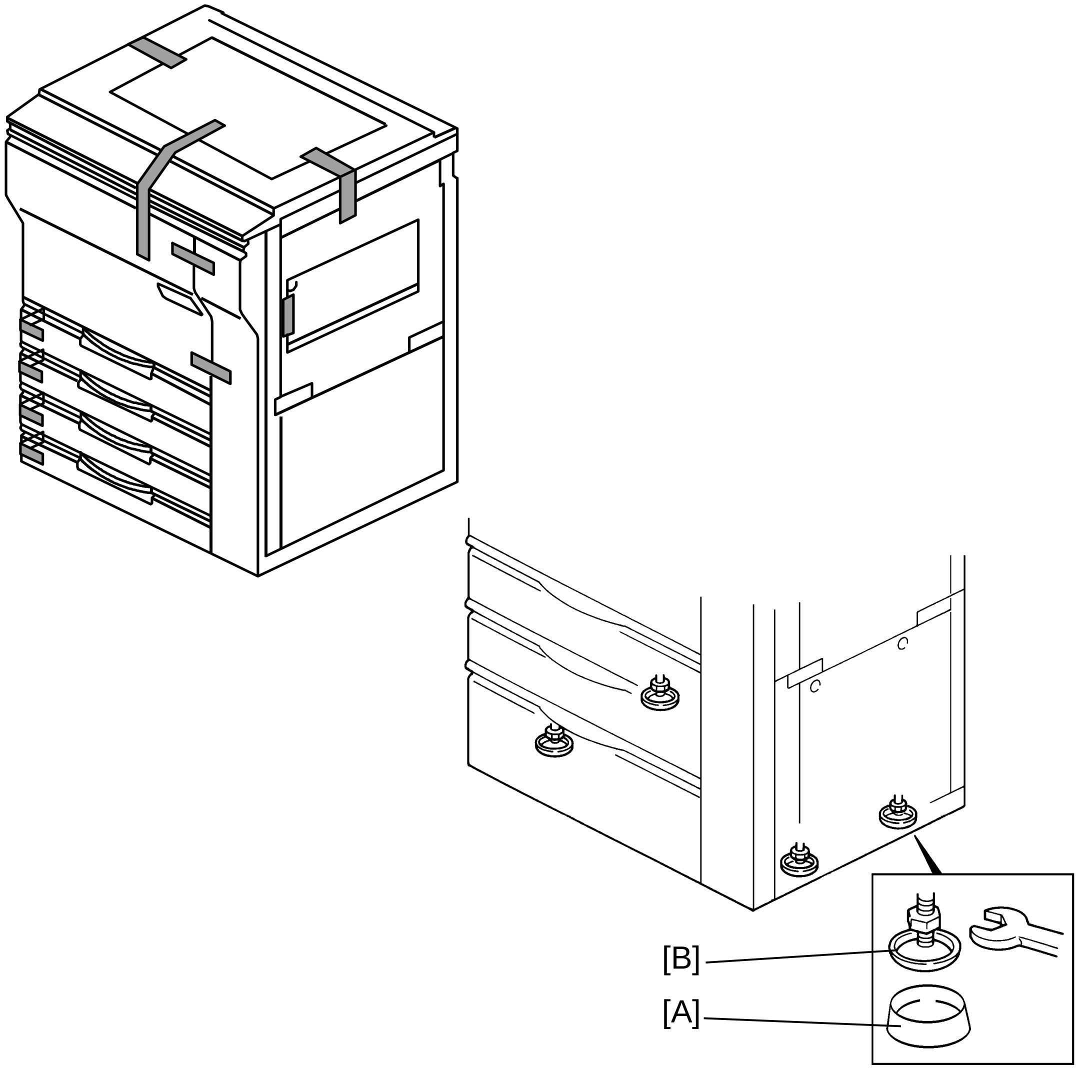
2.1 ACCESSORY CHECK

Check the quantity and condition of the accessories in the box according to the following list:

Description	Q’ty
1. Operating Instructions (Except –27 machine)	1
2. User Survey Card (–17 machine only)	1
3. Envelope-NECR (–17 machine only)	1
4. NECR (–17, –27, –29 machines only)	1
5. Sensor Cover	1
6. Flat Head Screw 4 x 6	1
7. Leveling Foot	4

2.2 COPIER INSTALLATION PROCEDURE

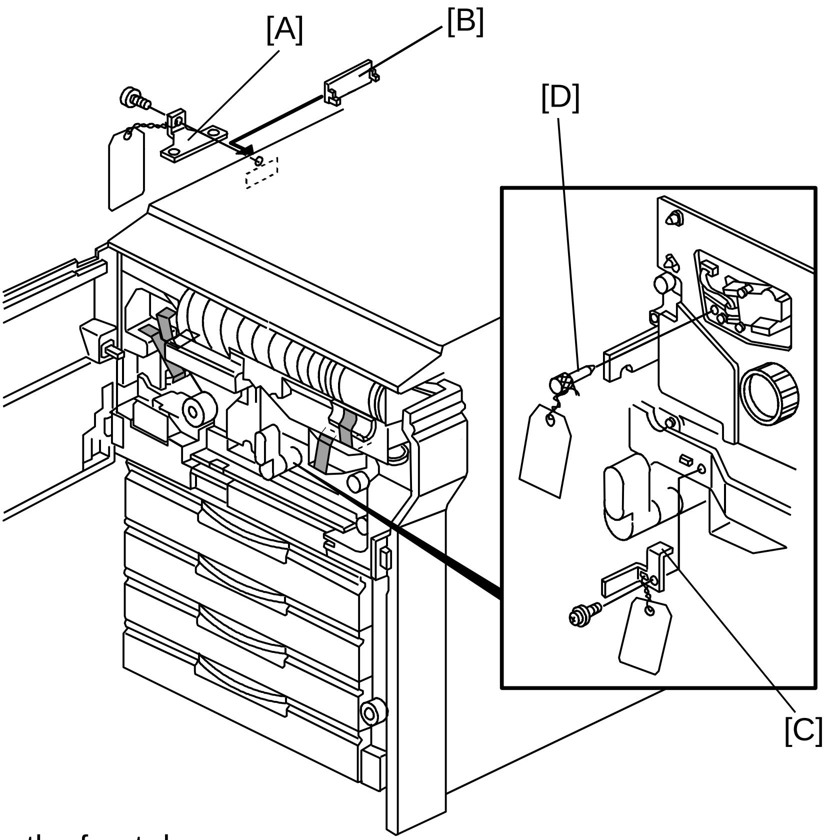
NOTE: Since the installation procedure is not packed with the copier as an accessory, always bring this manual with you.



CAUTION: When installing the copier, make sure that the copier is unplugged.

NOTE: Insert the leveling shoes [A] under the leveling foots [B], and level the machine before starting the installation. (The leveling foots [B] can be screwed up or down.)

1. Remove the tape strips.



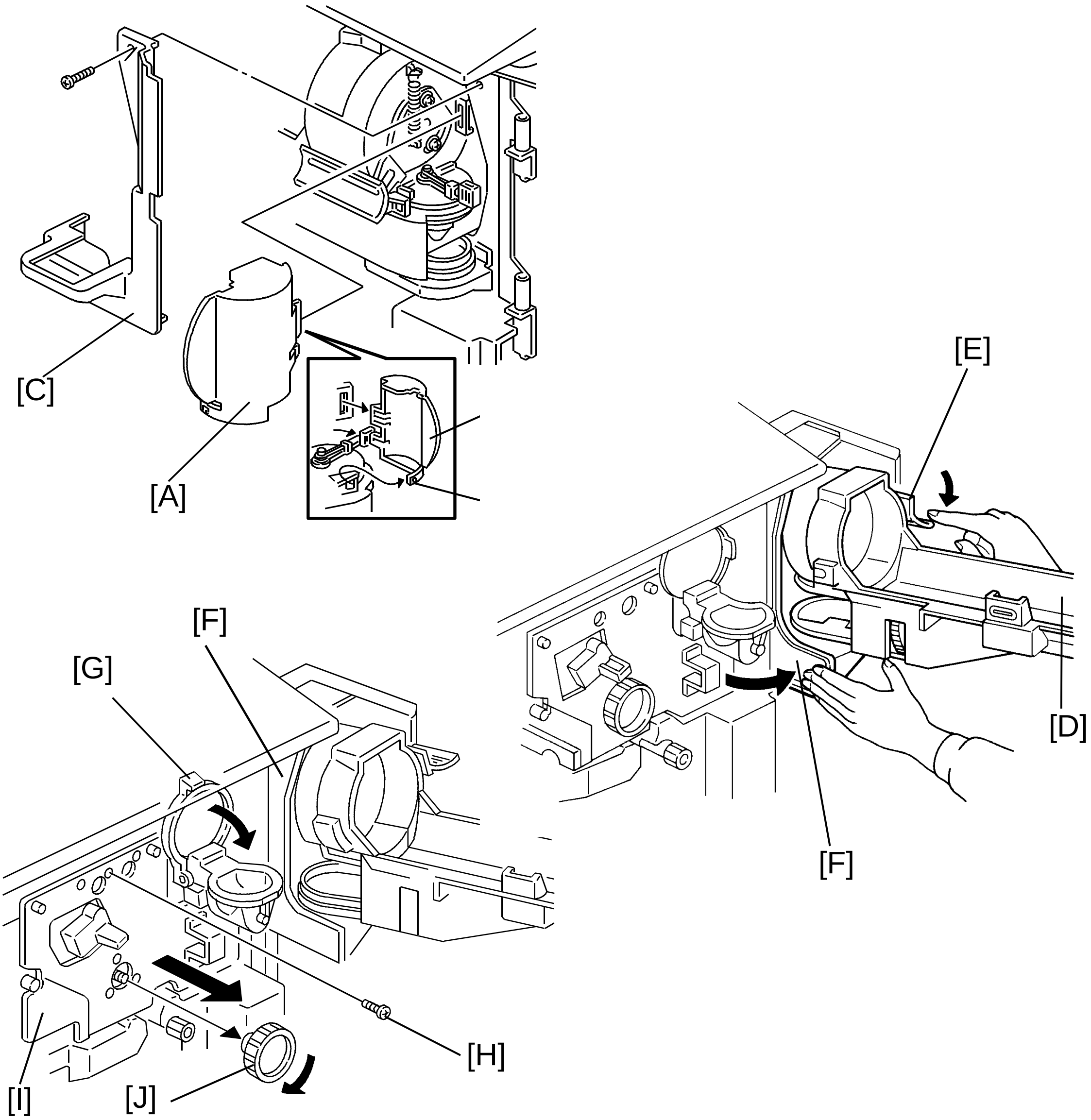
2. Open the front doors.

3. Remove the tape strips.

4. Remove the scanner clamp [A] (1 screw) and install the cap [B] stuck on the paper exit bracket with a tape.

5. Remove the transfer belt lock plate [C] (1 screw).

6. Turn about 180° then remove the cleaning unit lock pin [D].



7. Remove the shutter cover [A] by releasing the hook [B].

8. Remove the shutter inner cover [C] (1 screw).

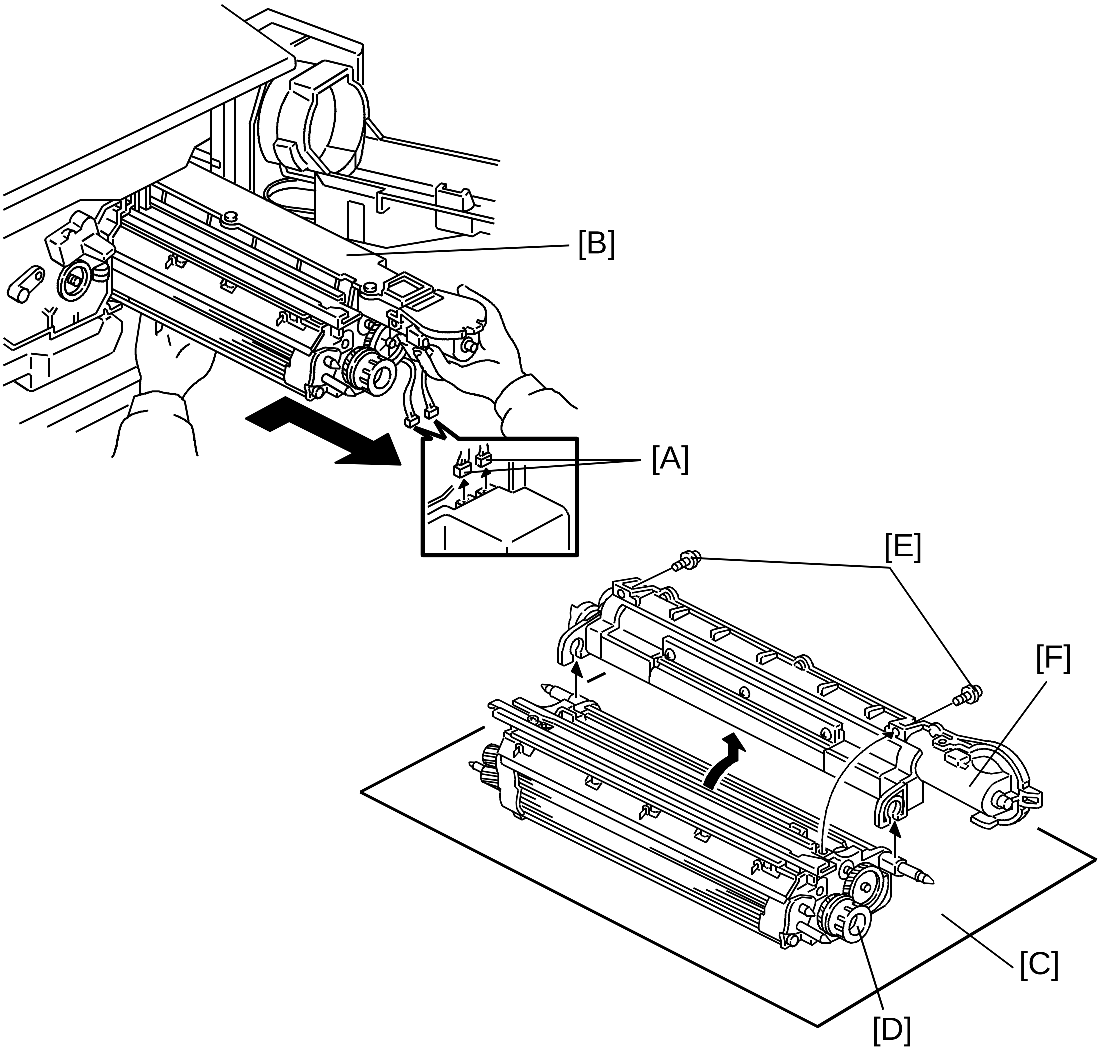
9. Open the toner bottle holder [D].

   NOTE: To open the toner bottle completely, while lowering the shutter lever [E], push the bracket [F] to the right.

10. Close the toner hopper cap [G].

11. Remove the screw [H] fixing the drum stay [I].

12. Remove the drum stay knob [J].



13. Disconnect two connectors [A].

14. Pull out the development unit [B].

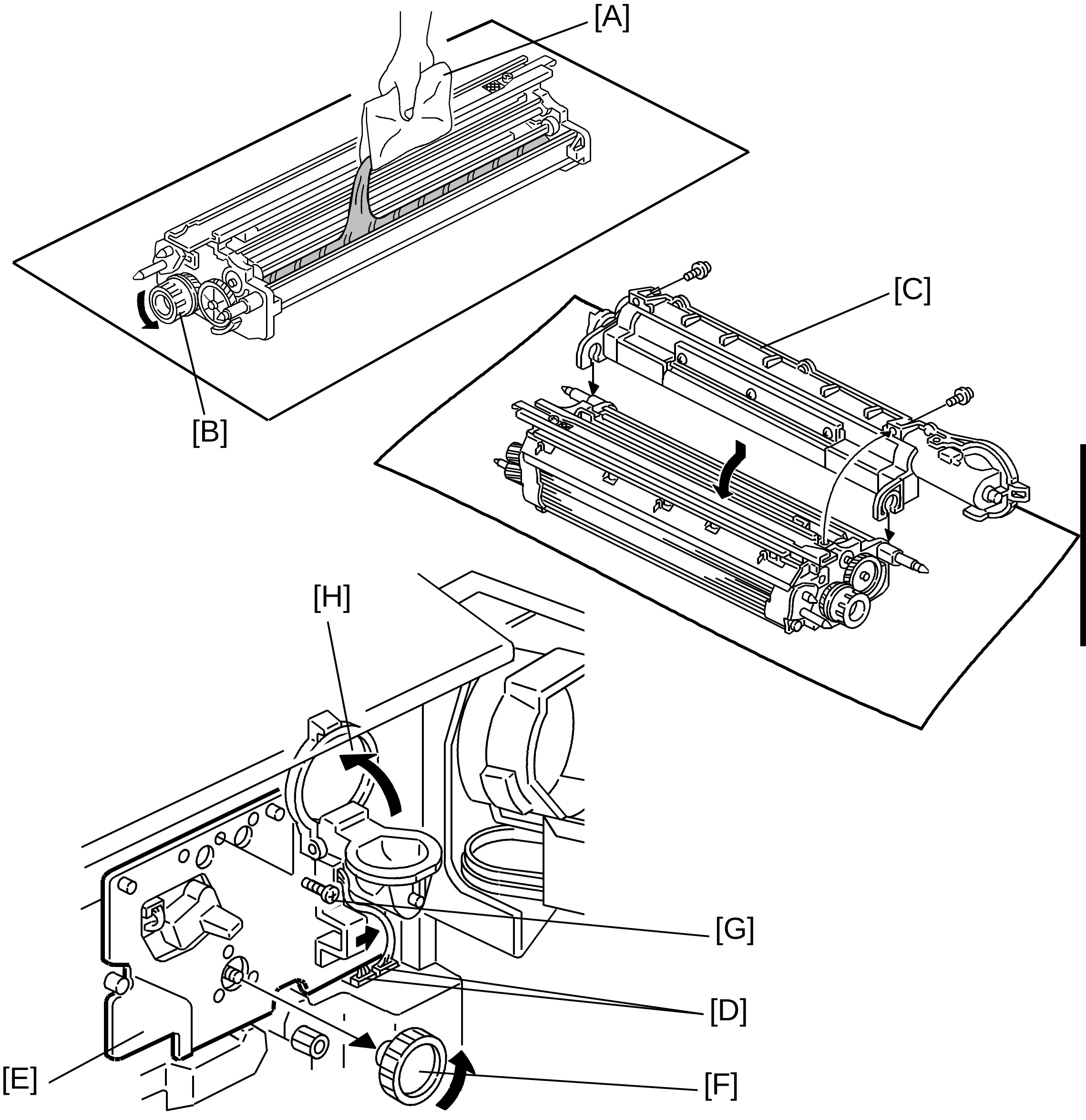
NOTE: 1. To prevent drum scratches, push the development unit to the right while pulling it out.

2. Place the development unit on the sheet [C] attached with the new developer to prevent foreign matter from being attracted to the sleeve rollers.

3. When pulling out the development unit, do not pull the knob [D].

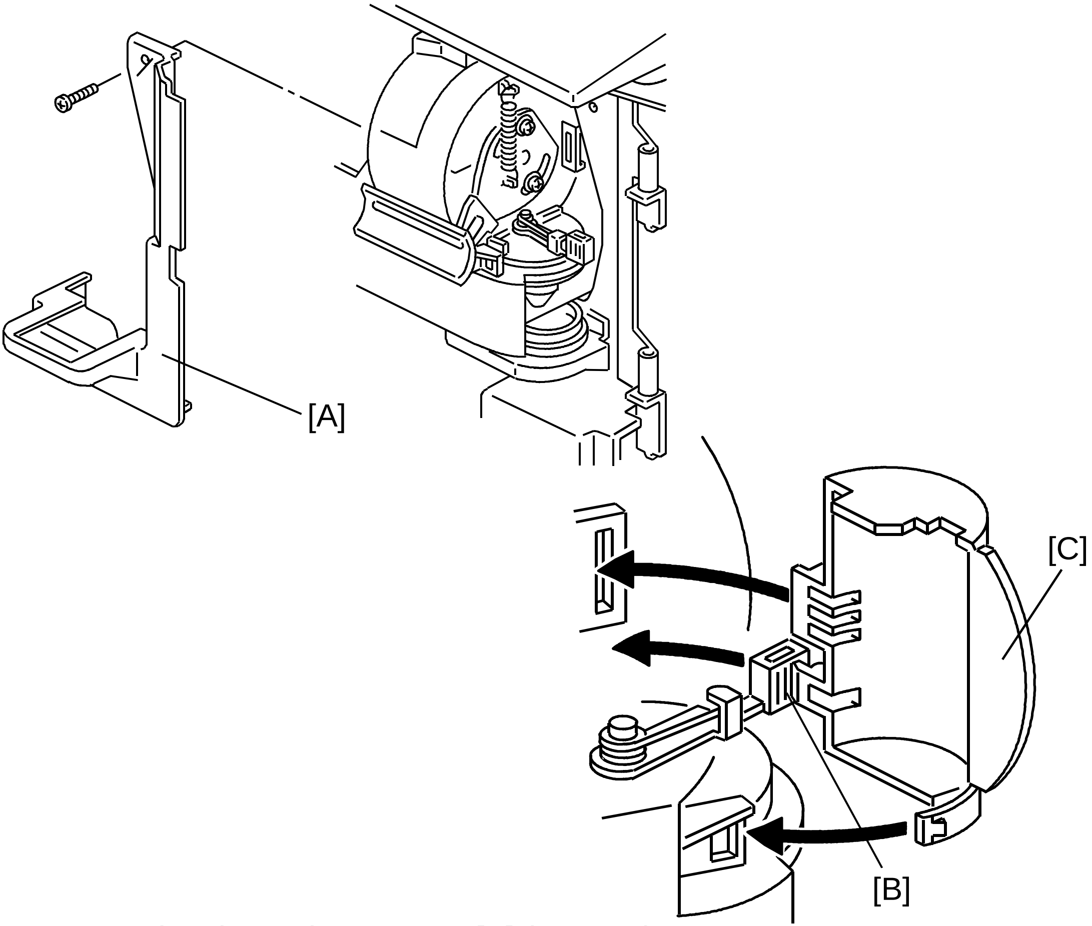
15. Remove two screws [E] fixing the toner hopper [F].

16. Turn the toner hopper 90 degree, then, move it up to remove it from the development unit.



17. Evenly pour in one pack of developer [A] while turning the knob [B].
18. Install the toner hopper [C] to the development unit (2 screws).
19. Install the development unit to the machine.
20. Connect two connectors [D].
21. Install the drum stay [E] and fix the drum stay knob [F] and one screw [G].

    NOTE: When installing the drum stay, be careful not to pinch the harness and keep the harness away from the gear.
22. Open the toner hopper cap [H].



23. Install the shutter inner cover [A] (1 screw).

24. While pushing the lever [B], set the shutter cover [C].

25. Set a toner bottle by following the instructions on the decal.

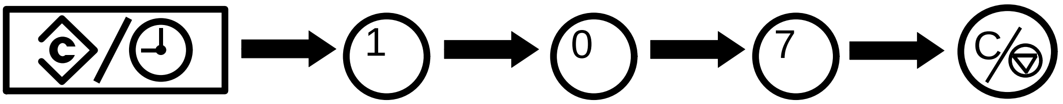
    NOTE: Before plugging in the power cord, install the guidance ROMs. (–26, –27 machines) (See page 3-12)

26. Plug in the power cord, then turn on the main switch. The machine automatically enter the process control data initial setting mode.

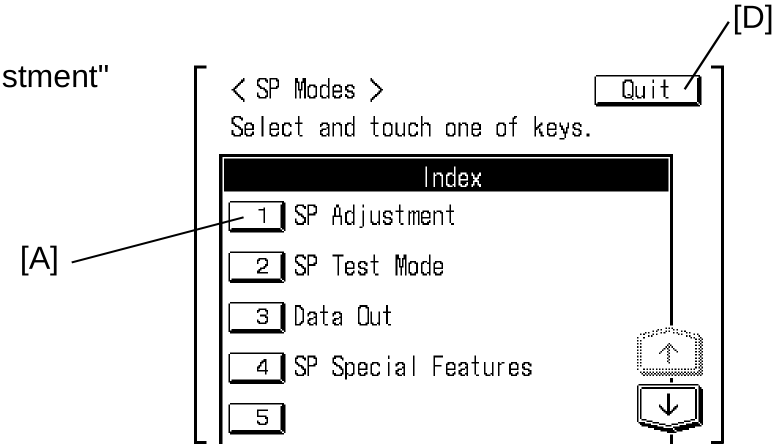
NOTE: Do not make any copy until completing developer initial setting. Do not turn off the main switch during the process control data initial setting mode.

27. Enter SP mode as follows:

   1) Press the clear modes key.
   2) Enter "107".
   3) Press the clear/stop key for more than 3 seconds.

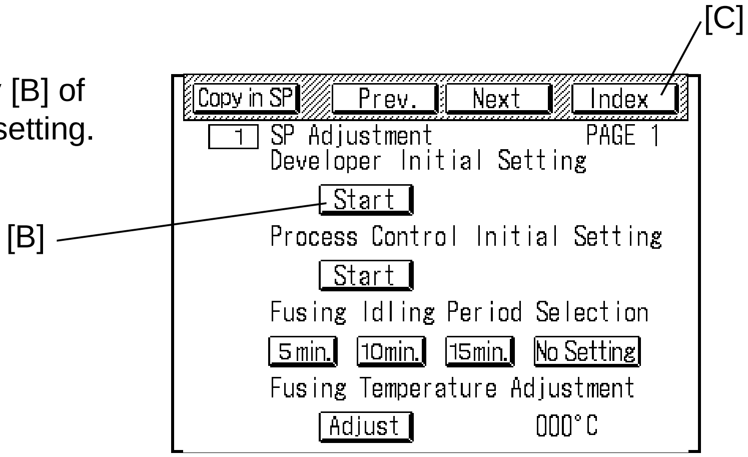


28. Press the "SP Adjustment" key [A].



< SP Modes >
Select and touch one of keys.
1 SP Adjustment
2 SP Test Mode
3 Data Out
4 SP Special Features

29. Press the "Start" key [B] of the developer initial setting.



1 SP Adjustment PAGE 1
Developer Initial Setting
Process Control Initial Setting
Fusing Idling Period Selection
Fusing Temperature Adjustment
000°C

NOTE: Developer initial setting stops automatically.

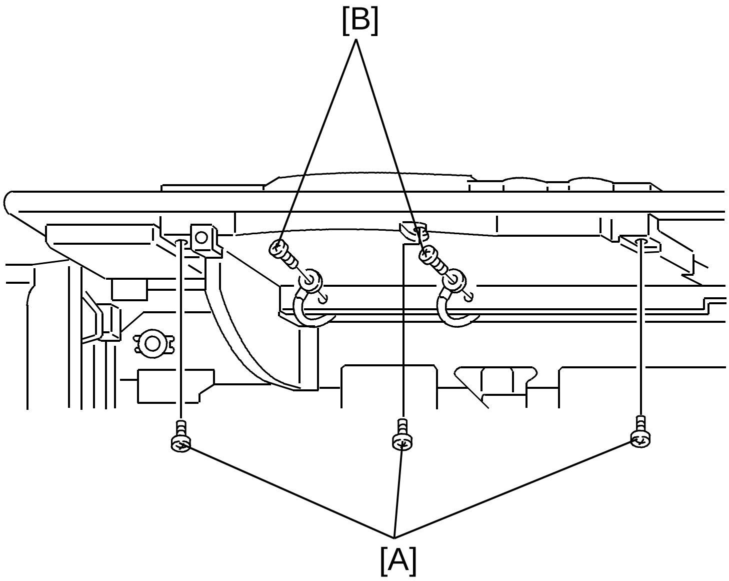
30. Press the "Index" key [C].

31. Press the "Quit" key [D] to exit SP mode.

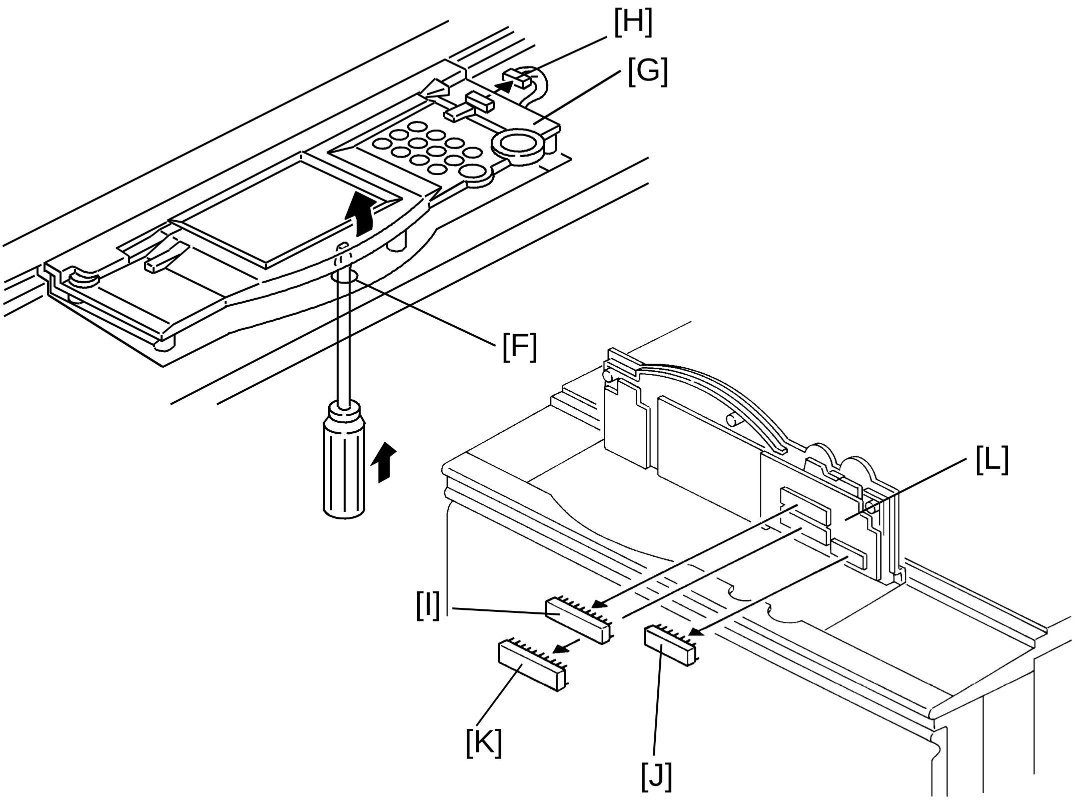
NOTE: If the developer initial setting is not completed, you cannot exit the SP mode by pressing the "Quit" key. If this occur, turn off and on the main switch then repeat steps 29 to 33 again. If the result is the same, see the troubleshooting section "SC352" (Page 6-).

32. Check copy quality and machine operation.

2.3 GUIDANCE ROM, INSTALLATION (OPTION: EUROPE VERSION ONLY)



1. If necessary, replace the three guidance ROMs on the operation panel PCB with the optional guidance ROMs as follows:
   1) Remove three screws [A].
   2) Remove the two screws [B] securing the protective earth wires.



5) Insert the screw driver from the hole [F] and push the operation panel [G] up.

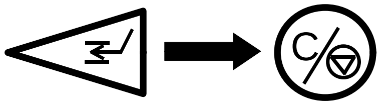
6) Disconnect the connector [H].

7) Replace the guidance ROMs (IC111 [I], IC112 [J], IC113 [K]) on the operation panel PCB [L].

8) Re-install the operation panel, the left inner cover and the left front door.

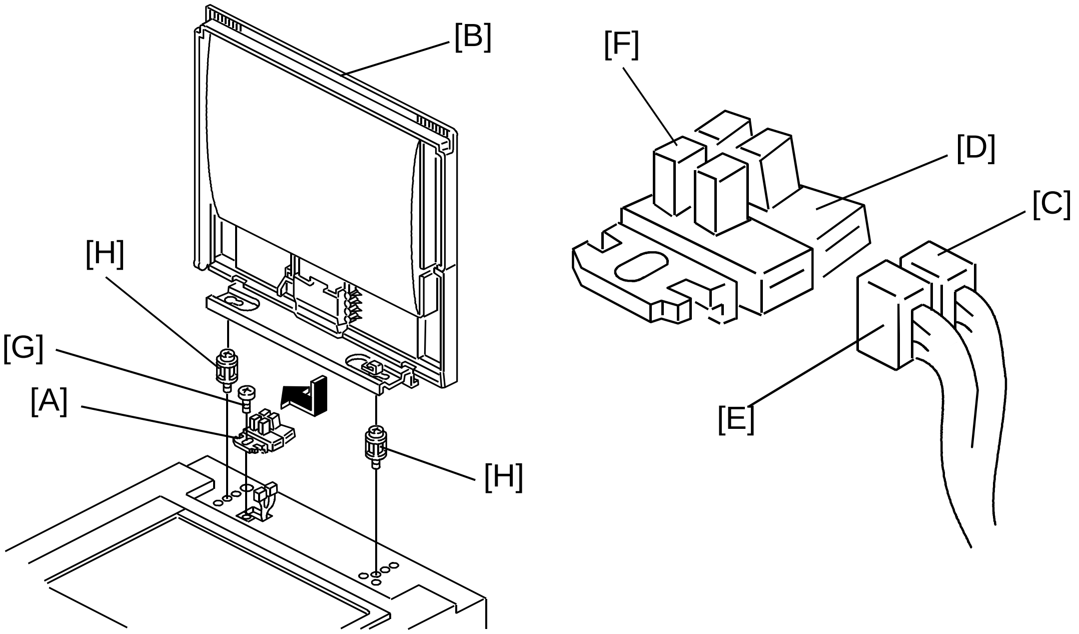
2. After installing the new guidance ROMs, plug in the power cord and turn on the main switch then perform the "touch panel display position adjustment" as follows.

1) Press the interrupt key then press the clear/stop key more than three seconds.



2) Follow the guidance on the LCD.

2.4 PLATEN COVER (OPTION) INSTALLATION



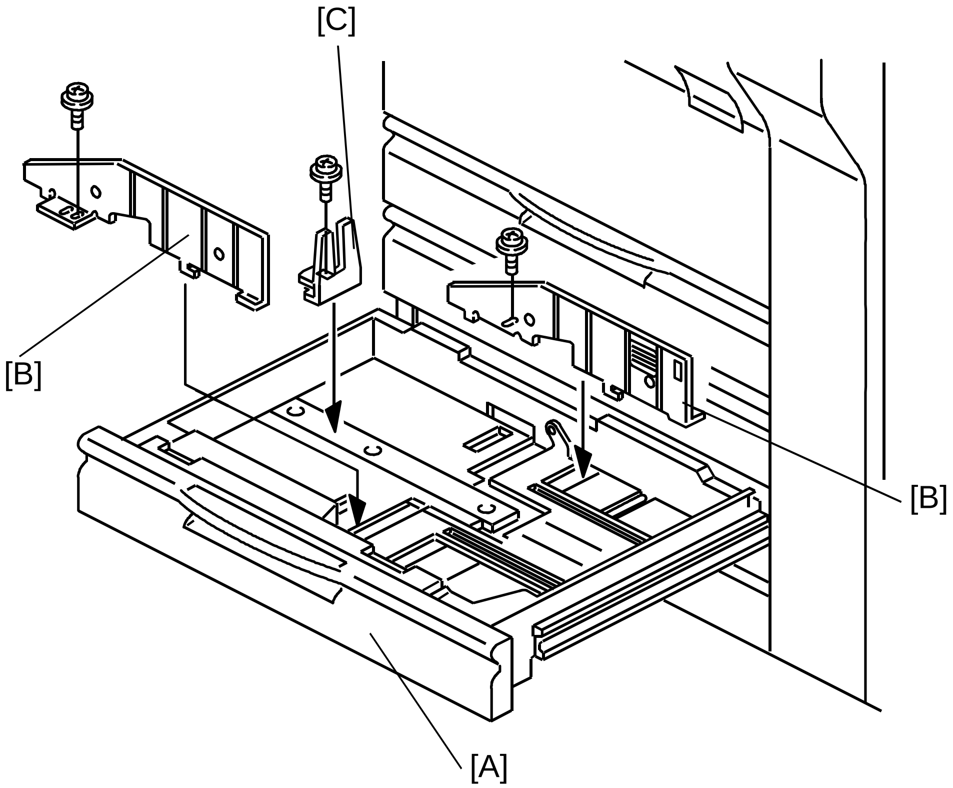
Install the optional platen cover as follows:

1. Install the sensor ass’y [A] which is an accessory of the platen cover [B] as follows:
    1) Connect the red connector [C] to the rear sensor [D].
    2) Connect the white connector [E] to the front sensor [F].
    3) Secure the sensor assembly with a screw [G].

2. Install the platen cover hooks [H].

3. Install the platen cover [B].

2.5 PAPER SIZE CHANGE



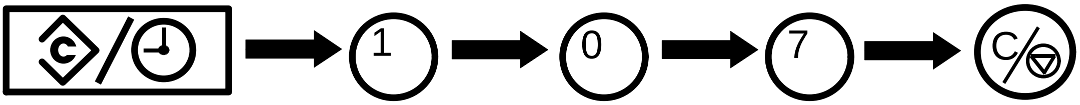
At the factory, all paper cassettes (1st, 2nd and 3rd) are set as A4 sideways. According to the customer's request, change the paper size as follows.

2.5.1 550 Sheets Paper Tray (1st and 3rd feed stations for A095 copier)

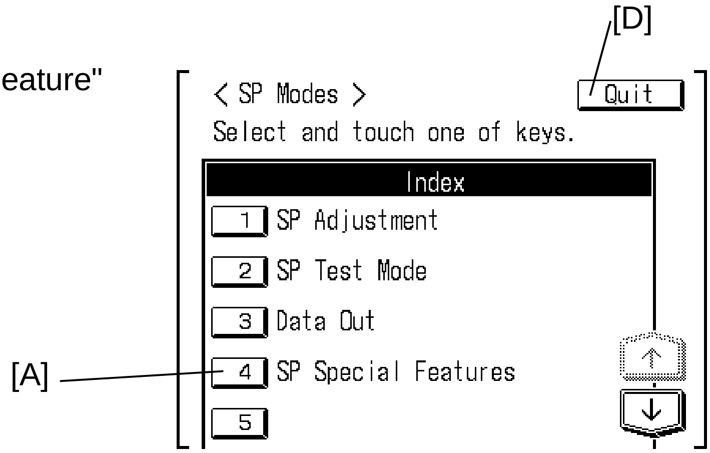
1. Draw out the paper feed tray [A].
2. Change the position of the front and the rear side fences [B] (2 screws each) and end fence [C] (one screw) according to the paper size.
3. Stick a size decal on the tray.

4. Enter SP mode as follows:

   1) Press the mode clear key.
   2) Enter "107".
   3) Press the clear/stop key more than 3 seconds.

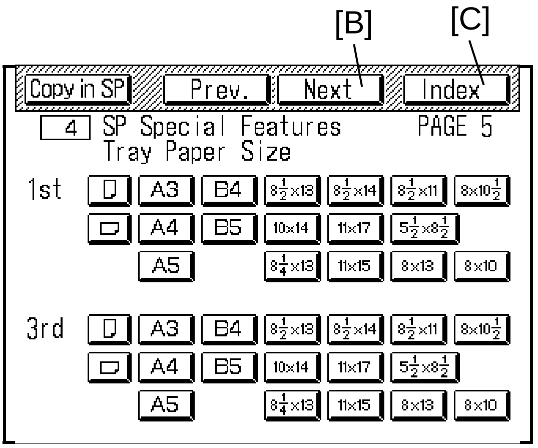


5. Press the "SP Special Feature" key [A].


[D]
< SP Modes >
Quit
Index
1 SP Adjustment
2 SP Test Mode
3 Data Out
[A]
4 SP Special Features
5

Select and touch one of keys.

6. Press the "Next" key [B] 4 times to select the paper tray size setting mode (page 5) and press the appropriate paper size key of the 1st or the 3rd feed station.

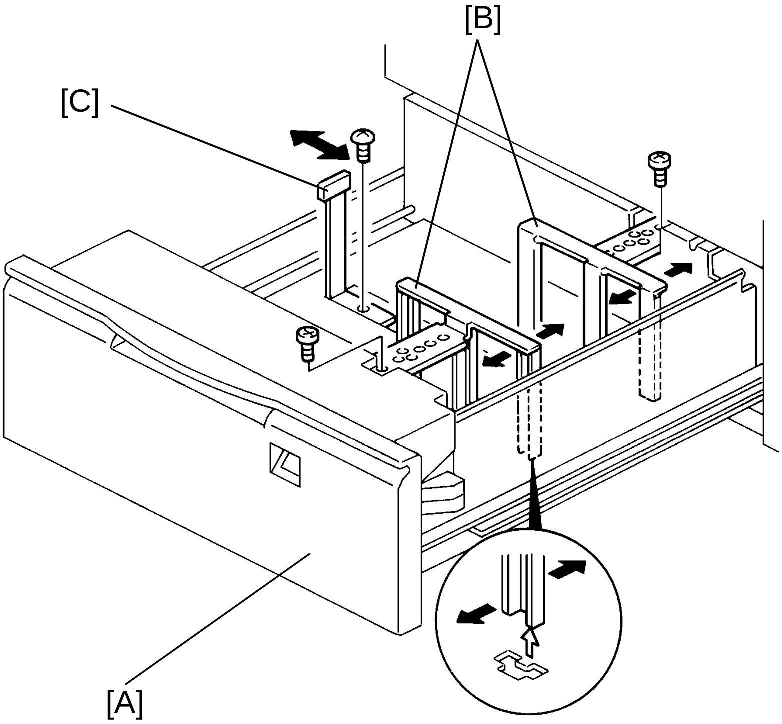

[B]
[C]
Copy in SP
Prev.
Next
Index
4 SP Special Features
PAGE 5
Tray Paper Size
1st
A3
B4
8 1/2×13
8 1/2×14
8 1/2×11
8×10 1/2
A4
B5
10×14
11×17
5 1/2×8 1/2
A5
8 1/4×13
11×15
8×13
8×10
3rd
A3
B4
8 1/2×13
8 1/2×14
8 1/2×11
8×10 1/2
A4
B5
10×14
11×17
5 1/2×8 1/2
A5
8 1/4×13
11×15
8×13
8×10

7. Press the "Index" key [C].

8. Press the "Quit" key [D] to exit SP mode.

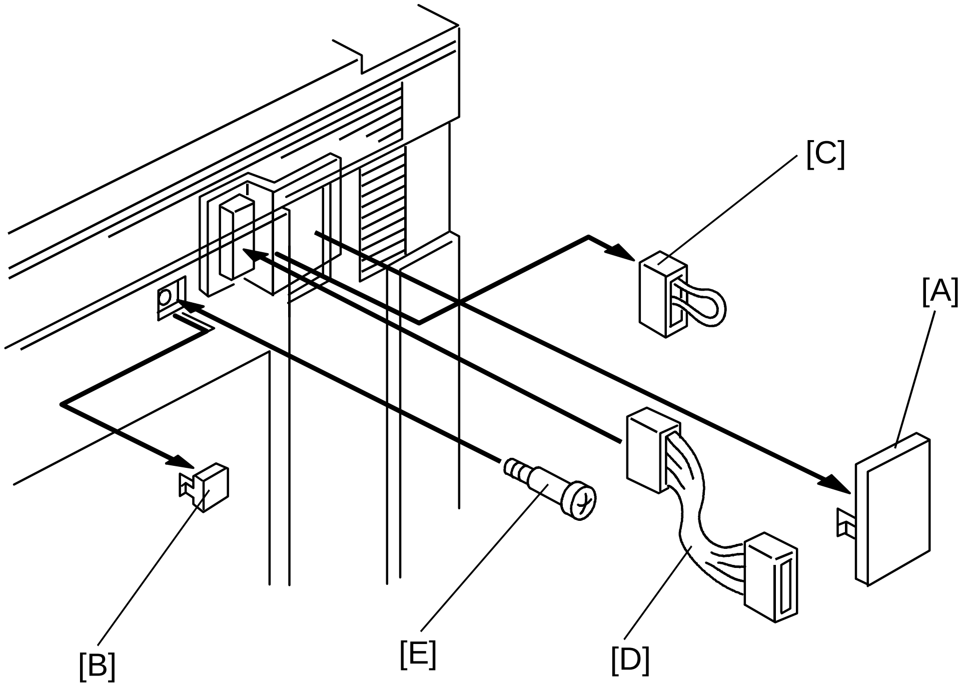
9. Check copy quality and machine operation.

2.5.2 1500 Sheets Paper Tray (3rd feed station for A096 copier)



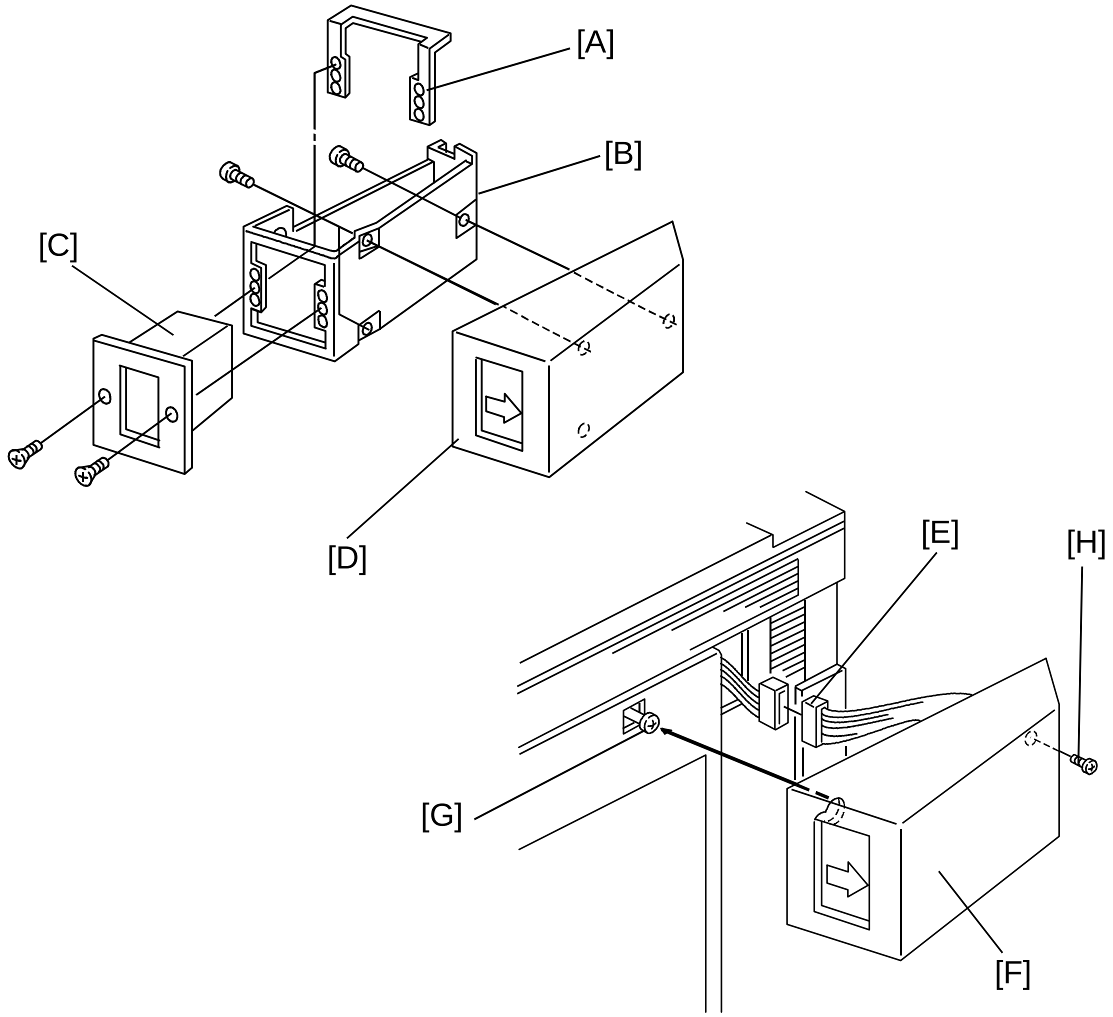
1. Draw out the third feed tray [A].
2. Change the position of the front and the rear side fences [B] (1 screw each) and the end fence [C] (one screw) according to the paper size.
3. Perform steps 3 to 8 from the previous page.

2.6 KEY COUNTER HOLDER INSTALLATION (OPTION)



NOTE: Key counter holder set is available as a service part.

1. Remove the two plastic caps [A] and [B] on the right upper cover of the copier.
2. Replace the short-circuit connector [C] with the connector of the accessory harness [D].
3. Install the stepped screw [E].

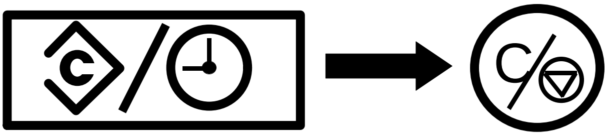


4. Hold the fixing plate [A] on the inside of the key counter bracket [B] and insert the key counter holder [C].
5. Fix the key counter holder [C] to the bracket [B] (2 screws).
6. Install the key counter cover [D] (2 screws).
7. Connect the connector [E] of the key counter holder.
8. Hook the key counter holder assembly [F] to the stepped screw [G].
9. Secure the key counter holder assembly [F] with a screw [H].

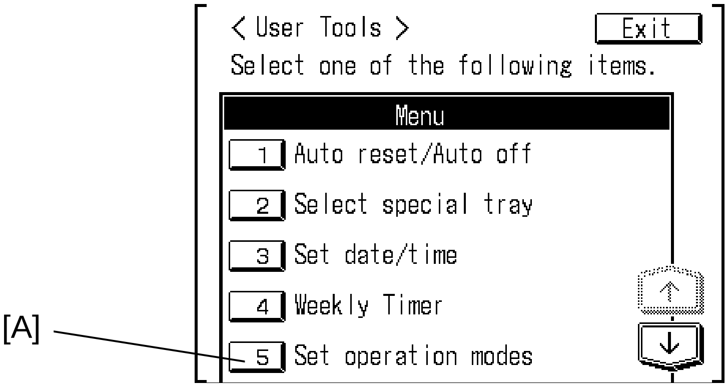
2.7 IMAGE DENSITY ADJUSTMENT

The copy image density is already adjusted to the standard level at the factory. If a customer requests to have the image density adjusted, it can be done through the User Tool mode.

1. Enter the User Tool mode as follows:
   1) Press the clear mode key.
   2) Press the clear/stop key more than 3 seconds.



2. Press the "Set operation modes" key [A].



< User Tools >

Exit

Select one of the following items.

Menu

1 Auto reset/Auto off

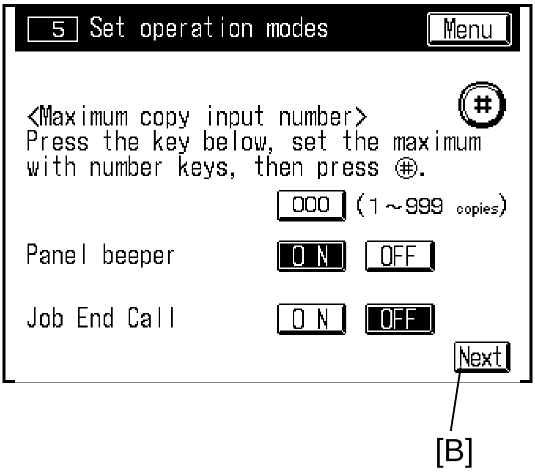
2 Select special tray

3 Set date/time

4 Weekly Timer

5 Set operation modes

3. Press the "Next" key once [B].



5 Set operation modes

Menu

<Maximum copy input number>
Press the key below, set the maximum
with number keys, then press ⊕.

000 (1～999 copies)

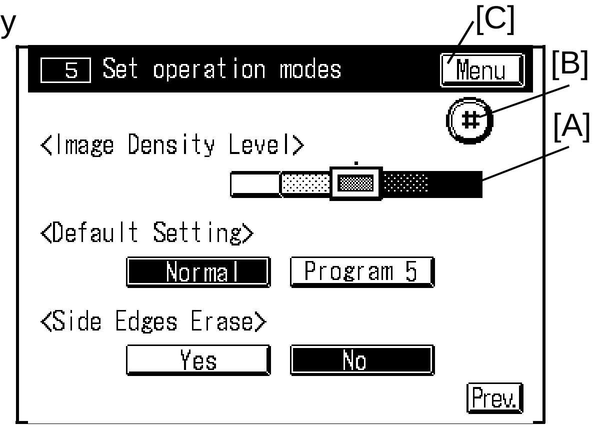
Panel beeper ON OFF

Job End Call ON OFF

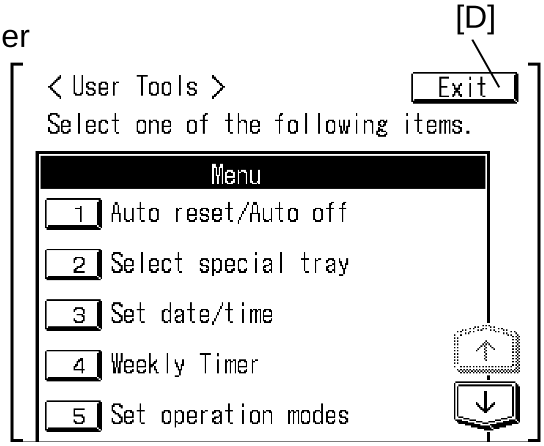
Next

4. Select appropriate Image Density level (5 steps) adjustment:
   1) Press appropriate ID level key [A].
   2) Press the enter key [B].

5. Press the "Menu" key [C].


[C]
[B]
[A]
5 Set operation modes
Menu
#
<Image Density Level>
<Default Setting>
Normal
Program 5
<Side Edges Erase>
Yes
No
Prev.

6. Press the "Exit" key [D] to exit User Tools mode.


[D]
< User Tools >
Exit
Select one of the following items.
Menu
1 Auto reset/Auto off
2 Select special tray
3 Set date/time
4 Weekly Timer
5 Set operation modes

7. Check copy quality.

SECTION 4

SERVICE TABLES

1. SERVICE REMARKS

1.1 HANDLING THE DRUM

The organic photoconductor drum is comparatively more sensitive to light and ammonia gas than a selenium drum.

1. Never expose the drum to direct sunlight.
2. Never touch the drum surface with bare hands. When the drum surface is touched with fingers or becomes dirty, wipe with a dry cloth or clean with wet cotton. Wipe with a dry cloth after cleaning with wet cotton.
3. Never use alcohol to clean the drum; alcohol dissolves the drum surface.
4. Store the drum in a cool, dry place away from heat.
5. Take care not to scratch the drum as the drum layer is thin and is easily damaged.
6. Never expose the drum to corrosive gases such as ammonia gas.
7. Always keep the drum in its protective sheet when out of the copier. Also always close the protective shutter on the drum unit when keeping the drum unit out of the copier. Doing so avoids exposing the drum to bright light or direct sunlight. This will protect the drum from light fatigue.
8. Process control data initial setting ($\boxed{1}$ SP Adjustment: PAGE 1) must be performed when a new drum is installed.

1.2 DRUM UNIT

1. Make sure that the drum unit is set in position and the drum stay is secured with a screw when the main switch is turned on. If the drum unit is loose, poor contact of the drum connectors may cause electrical noise, resulting in unexpected malfunctions (RAM data change is the worst case).
2. To prevent drum scratches, remove the development unit before removing the drum unit.

1.3 CHARGE CORONA

1. Clean the corona wires with a dry cloth. Do not use sandpaper or solvent.
2. Clean the charge corona casing with water first to remove NO_X. Then clean it with alcohol if any toner still remains on the casing.
3. Clean the end blocks with a blower brush first to remove toner and paper dust. Then clean it with alcohol if any toner still remains on it.
4. Do not touch the corona wires with oily bare hands. Oil stains may cause white bands on copies.
5. Make sure that the corona wires are correctly positioned between the cleaner pads and that there is no foreign material (iron filings, etc.) on the casing.
6. When installing new corona wires, do not bend or scratch the wire surface to avoid any uneven charge. Also be sure that the corona wires are correctly positioned in the end blocks. (See charge corona wire replacement.)
7. Clean the charge grid plate with a blower bush (not with a cloth).
8. Do not touch the charge grid plate with oily bare hands. Also, do not bend the charge grid plate or make any dent on it. Doing so may cause an uneven charge.

1.4 OPTICS

1. When installing the exposure glass, make sure that the mark (red for the A095 and white for the A096) on the edge of the glass faces up. This side has received a special treatment to be smoother and generate less static electricity.
2. When moving the 1st or 2nd scanners, always hold them at the center. Move them slowly, carefully, and gently.
3. Do not bend or crease the exposure lamp flat cable.
4. Do not touch the following parts with bare hands:
   a) Reflectors
   b) Exposure lamp
   c) Mirrors and lens
   d) V_D, ADS and V_L patterns
5. To clean the mirrors and lens, use only a clean soft cloth damped with alcohol or water.
6. Do not turn the vertical lamp position adjusting cam. Adjusting the vertical lamp position is very difficult because the filament cannot be seen clearly as the lamp is frosted.
7. The mirror surface with the reflective coating must face the light path. The spring plates must contact the reverse side of the mirror (the side without the reflective coating).
8. Because the toner shielding filter is coated with an anti-static solution (which is removed when wiped with water or alcohol) clean the toner shielding filter very gently to prevent generating static electricity, and wipe with dry cloth.

1.5 ERASE LAMP

1. A narrower lead edge erase margin increases the possibility of fusing jams. The margin should be at least 1.0 mm.
2. After cleaning the erase lamp unit, rub it lightly with your finger to discharge any static electricity on the unit surface.
3. Use only a dry cloth to clean the potential sensor.

1.6 DEVELOPMENT UNIT

1. Be careful not to nick or scratch the development roller sleeves.
2. Place the development unit on a sheet of paper after removing it from the copier. This prevents any small metal objects (staples, clips, E-rings, etc.) from being attracted to the development roller and getting inside the unit.
3. Be careful not to bend terminals on the rear side.
4. Clean the drive gears after removing the used developer.
5. Never load different types of developer or toner into the development unit. Doing so will cause poor copy image and toner scattering inside the copier.
6. Developer initial setting is necessary when new developer is loaded.
   Do not perform the developer initial setting with used developer.
   Do not make any copy before initial setting.
7. When removing the development unit, push it to the right to prevent the OPC drum from being scratched by part of the development unit.
8. The doctor gap and the development rollers position must not be adjusted in the field as they are precisely adjusted at the factory using special tools. Do not loosen any screws with white paint.
9. Before pulling out the development unit, disconnect two connectors.
10. When pulling out the development unit, do not pull the knob.
11. When setting the development unit in the machine, do not forget to set the two connectors.

1.7 TRANSFER BELT UNIT

1. Do not touch the transfer belt with oily bare hands.
2. When servicing the transfer belt cleaning unit, be careful not to damage the edge of the cleaning blade.
3. Apply setting powder or toner to the new cleaning blade.

1.8 CLEANING SECTION

1. When servicing the cleaning section, be careful not to damage the edge of the cleaning blade.
2. Do not touch the cleaning brush with bare hands.
3. Before disassembling the cleaning section, place a sheet of paper under it to catch any toner falling from the section.
4. Empty the used toner collection bottle at every PM.
5. Apply setting powder to the new cleaning blade.

1.9 PRE-TRANSFER LAMP

1. After cleaning the pre-transfer lamp filter, rub it lightly with your finger to discharge any static electricity on the filter.

1.10 PAPER FEED

1. Do not touch the pick-up, feed, separation rollers and the friction pads with oily bare hands.
2. The side fences and the rear fence of the paper trays should be positioned correctly to align with the actual paper size. Otherwise, paper misfeeds may occur.
3. Be careful when reinstalling the paper feed (pick-up, feed, separation) rollers in the paper tray unit. They are not interchangeable with the feed rollers of the by-pass feed tray and 3.5 K LCT because the feeding direction is different.
4. When actuating the front door safety switch to check the machine operation while the front doors are open also actuate the lower front door safety switch. Otherwise, the paper feed motor does not activate, causing SC501.

1.11 FUSING UNIT

1. Be careful not to damage the edges of the hot roller strippers or their tension springs.
2. Do not touch the fusing lamp with bare hands.
3. Make sure that the fusing lamp is positioned correctly (the yellow connector must be at the rear) and that it does not touch the inner surface of the hot roller.

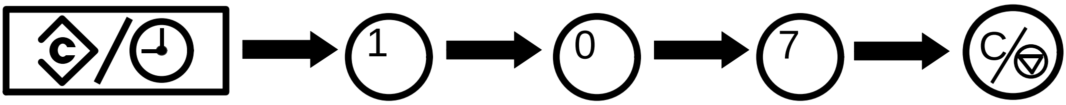
2. SERVICE PROGRAM MODE

2.1 SERVICE PROGRAM MODE OPERATION

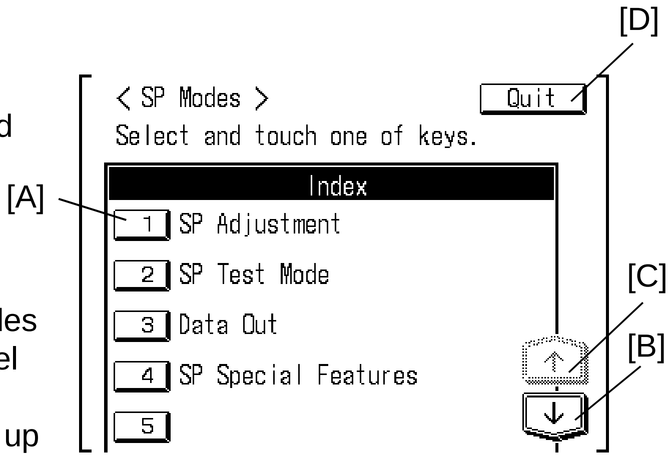
The service program (SP) mode is used to check electrical data, change modes, and adjust values.

2.1.1 Service Program Access Procedure

1. Press the clear modes key.
2. Enter "107".
3. Press the clear/stop key for more than 3 seconds until the service program menu appears on the touch panel display.



4. Touch a number [A] on the display to access the desired function.
   This copier has 9 service program modes (mode 5 is not used).
   Only 5 service program modes are visible on the touch panel display at one time.
   Use the down key [B] or the up key [C] to see other service program mode menus.

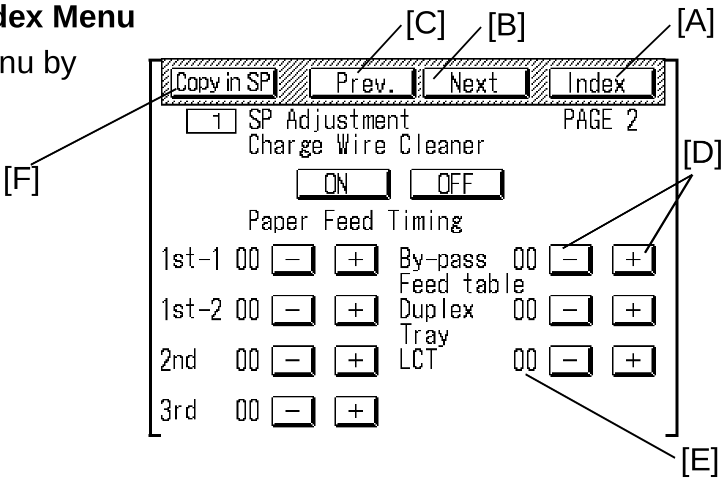

[D]
< SP Modes >
Quit
Select and touch one of keys.
Index
[A]
1 SP Adjustment
2 SP Test Mode
3 Data Out
4 SP Special Features
5
[C]
[B]

2.1.2 To Exit SP Mode

1. Touch the Quit key [D].

2.1.3 To Return to the Index Menu

1. Return to the index menu by touching Index [A] on the display.


[C]
[B]
[A]
[F]
[D]
[E]
Copy in SP
Prev.
Next
Index
1
SP Adjustment
PAGE 2
Charge Wire Cleaner
ON
OFF
Paper Feed Timing
1st-1 00 − +
By-pass Feed table 00 − +
1st-2 00 − +
Duplex Tray 00 − +
2nd 00 − +
LCT 00 − +
3rd 00 − +

2.1.4 Change the Menu Screen

1. To move to the next page, touch Next [B].

2. To move to the previous page, touch Prev. [C].

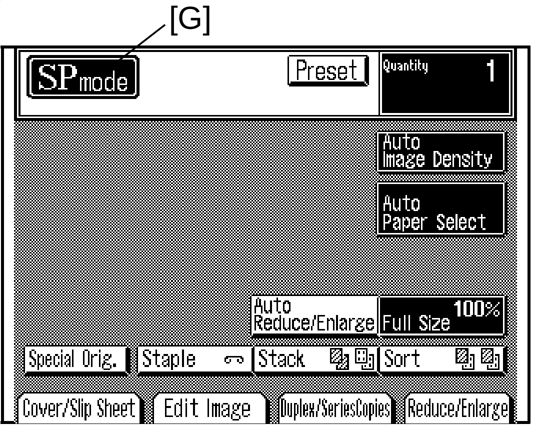
NOTE: For the adjustments for which the data is entered by using, − + [D] the default data is "00".

2.1.5 Access to "Copy in SP" Mode

1. Press Copy in SP [F] to access "Copy in SP" mode. LCD displays as shown at right.

2. Select the appropriate copy mode and make trial copies.

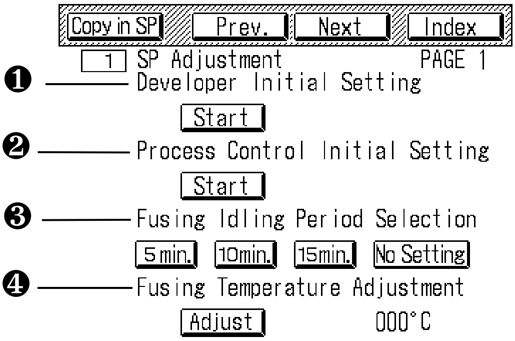
3. Return to the SP mode by pressing SP mode [G].


[G]
SP mode
Preset
Quantity 1
Auto Image Density
Auto Paper Select
Auto Reduce/Enlarge
100% Full Size
Special Orig.
Staple
Stack
Sort
Cover/Slip Sheet
Edit Image
Duplex/SeriesCopies
Reduce/Enlarge

2.2 SERVICE PROGRAM MODE TABLE

1 SP ADJUSTMENT

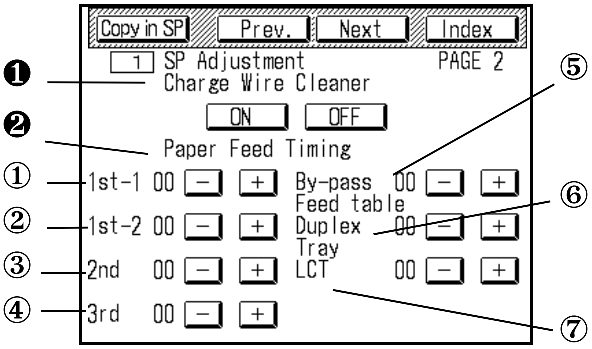
PAGE 1



1 SP Adjustment PAGE 1
Developer Initial Setting
Process Control Initial Setting
Fusing Idling Period Selection
Fusing Temperature Adjustment
000°C

Item	Function	Note
❶	Both the TD sensor toner supply target data (VREF) and the TD sensor gain data are set automatically by using new developer.	With new developer, do not make any copy before performing the developer initial setting. This mode is required when new developer is set or the TD sensor is replaced.
❷	Starts the process control data initial setting.	Perform this program when the following parts are replaced (or cleaned). Drum potential sensor / Exposure lamp / OPC drum / Main charge wire and casing / Mirrors / Lamps around the OPC drum / Charge P.P./ RAM etc.
❸	Increases the period to sufficiently heat the pressure roller at power on. **Default:** 5 min	Perform this only if poor fusing occurs just after the power is turned on.
❹	Adjusts fusing temperature. (1°C/ step) Procedure: 1) Touch Adjust . 2) Enter the appropriate number by using the number keys. 3) Press the enter key.	Increase only when thick paper is used and poor fusing occurs. Default: 185 °C

PAGE 2

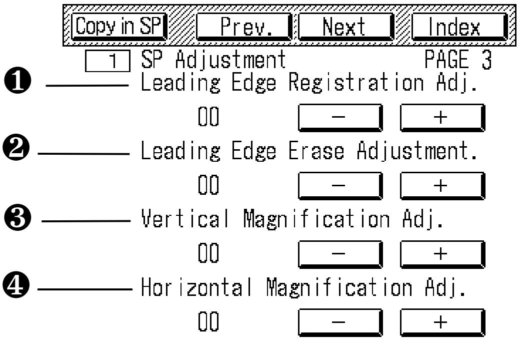


1 SP Adjustment PAGE 2
Charge Wire Cleaner
Paper Feed Timing
1st-1 00
1st-2 00
2nd 00
3rd 00
By-pass Feed table 00
Duplex Tray 00
LCT 00

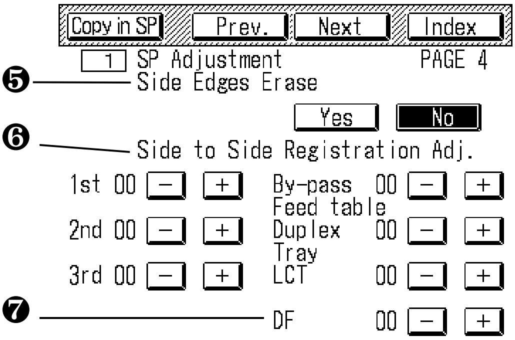
Item	Function	Note
❶	Enables or disables automatic charge wire cleaning mechanism. **Default:** ON	Select OFF only when a cleaning mechanism malfunction occur.
❷	Changes the paper feed clutch on timing to adjust the paper buckle at the registration roller. (1 mm/step)	Refer to 6.6 Paper Feed Timing Adjustment" in section 5. ① First paper feed clutch ON timing at the first copy ② First paper feed clutch ON timing after the second copy. ③ 2nd paper feed clutch ON timing. ④ 3rd paper feed clutch ON timing. ⑤ By-pass feed clutch ON timing. ⑥ Duplex feed clutch ON timing. ⑦ LCT feed clutch ON timing.

1 SP ADJUSTMENT

PAGE 3


Copy in SP
Prev.
Next
Index
1 SP Adjustment PAGE 3
❶ Leading Edge Registration Adj.
00 − +
❷ Leading Edge Erase Adjustment.
00 − +
❸ Vertical Magnification Adj.
00 − +
❹ Horizontal Magnification Adj.
00 − +

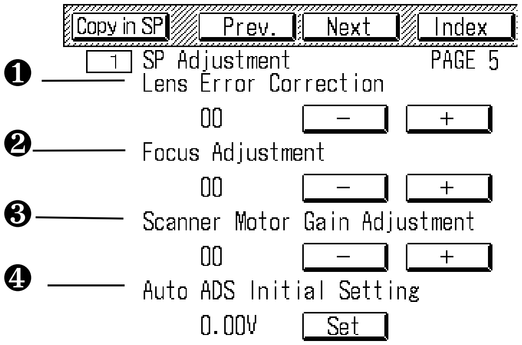
PAGE 4


Copy in SP
Prev.
Next
Index
1 SP Adjustment PAGE 4
❺ Side Edges Erase
Yes
No
❻ Side to Side Registration Adj.
1st 00 − +
2nd 00 − +
3rd 00 − +
By-pass Feed table 00 − +
Duplex Tray 00 − +
LCT 00 − +
❼ DF 00 − +

Item	Function	Note
❶	Changes the ON timing of the registration clutch. (0.5 mm/step)	**Adjustment standard:** 0 ± 2 mm
❷	Changes the OFF timing of the erase lamp to adjust the leading edge erase margin. (0.5 mm/step)	**Adjustment standard:** 3.5 ± 2.5 mm
❸	Adjusts magnification in the paper feed direction by adjusting the scanner motor speed. (0.1%/step)	Perform this adjustment when the optic control PCB is replaced. **Adjustment standard:** 100 ± 1%
❹	Adjusts magnification perpendicular to the direction of the paper feed. The lens position in the full size mode is changed. (0.1%/step)	Perform this adjustment when the optic control PCB is replaced. **Adjustment standard:** 100 ± 1%
❺	Enables or disables the 5 mm width side edge erase.	**Default:** No
❻	Adjusts the lens horizontal stop position for each paper feed section. (0.1 mm/step)	Refer to 8.9 Side-To-Side Registration Adjustment" in Section 5.
❼	Adjusts the lens horizontal stop position to compensate for variations of the side to side original position.	

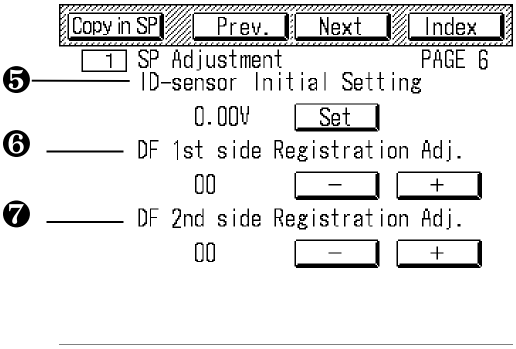
1 SP ADJUSTMENT

PAGE 5



1 SP Adjustment PAGE 5
Lens Error Correction 00
Focus Adjustment 00
Scanner Motor Gain Adjustment 00
Auto ADS Initial Setting 0.00V

PAGE 6

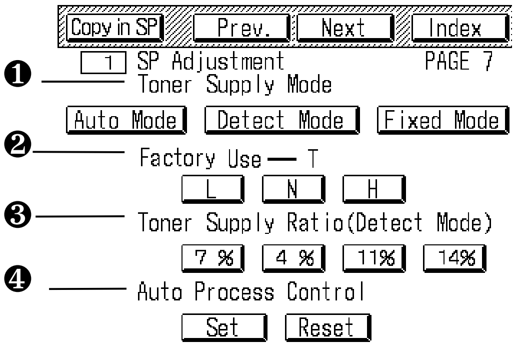


1 SP Adjustment PAGE 6
ID-sensor Initial Setting 0.00V
DF 1st side Registration Adj. 00
DF 2nd side Registration Adj. 00

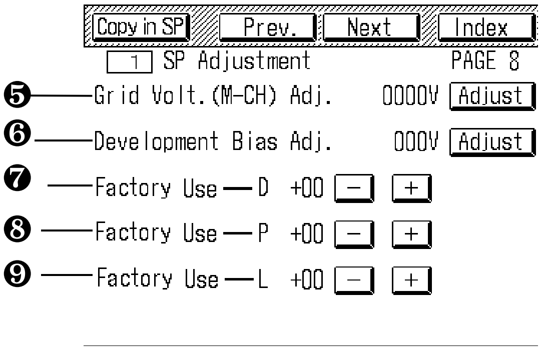
Item	Function	Note
❶	Adjusts the lens position to correct magnification in enlarge/reduction modes.	Input only the data number marked on the lens.
❷	Adjusts the 3rd scanner home position to correct the focus.	
❸	Factory use only	Do not change the data.
❹	Adjusts the ADS sensor output while scanning the ADS pattern to 2.7 ± 0.1 V	This mode is also performed during the process control data initial setting.
❺	Adjusts the VSG to 4.0 ± 0.2 V.	This mode is also performed during the process control data initial setting.
❻	Adjusts the original stop position against the original side scale in one-sided original mode (0.5 mm/step).	Refer to page 43 of the DJF manual.
❼	Adjusts the original stop position against the original side scale in two-sided original mode (0.5 mm/step).	Refer to page 44 of the DJF manual.

1 SP ADJUSTMENT

PAGE 7


Copy in SP
Prev.
Next
Index
1 SP Adjustment PAGE 7
❶ Toner Supply Mode
Auto Mode
Detect Mode
Fixed Mode
❷ Factory Use — T
L
N
H
❸ Toner Supply Ratio(Detect Mode)
7 %
4 %
11%
14%
❹ Auto Process Control
Set
Reset

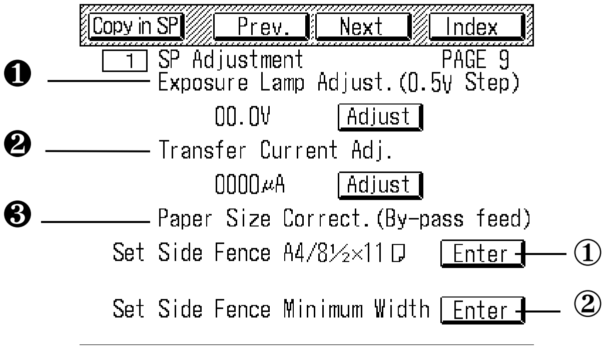
PAGE 8


Copy in SP
Prev.
Next
Index
1 SP Adjustment PAGE 8
❺ Grid Volt.(M-CH) Adj. 0000V Adjust
❻ Development Bias Adj. 000V Adjust
❼ Factory Use — D +00 − +
❽ Factory Use — P +00 − +
❾ Factory Use — L +00 − +

Item	Function	Note
❶	Selects toner supply mode. (See the process control section for details of each supply mode.) **Default:** Auto Mode	Select "Auto Mode" in the field.
❷	Factory Use only	Select "N" in the field.
❸	Changes the toner supply ratio in fixed toner supply mode. **Default:** 4%	Be careful, there is no overtoning protective system.
❹	Enables and disables the auto process control (V_R, V_L, V_D corrections). (See the process control section for details.) **Default:** Set	Normally select "Set". Select "Reset" only to confirm if the cause of the problem is related to process control or not.
❺	Selects the grid bias voltage when auto process control is disabled or RAM is cleared. (1 V/step) **Default:** 870 V	Enter the data by using the number keys, then touch "Enter".
❻	Selects the development bias voltage when auto process control is disabled or RAM is cleared. (1 V/step) **Default:** 220 V	Enter the data by using the number keys, then touch "Enter".
❼	Factory Use only	Do not change the data in the field.
❽	Factory Use only	Do not change the data in the field.
❾	Factory use only.	Do not change the data in the field.

1 SP ADJUSTMENT

PAGE 9

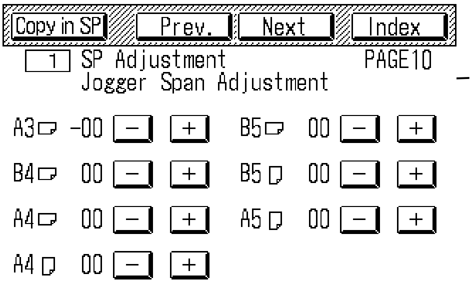


Copy in SP
Prev.
Next
Index
1 SP Adjustment PAGE 9
❶
Exposure Lamp Adjust.(0.5V Step)
00.0V
Adjust
❷
Transfer Current Adj.
0000μA
Adjust
❸
Paper Size Correct.(By-pass feed)
Set Side Fence A4/8½×11
Enter
①
Set Side Fence Minimum Width
Enter
②

Item	Function	Note
❶	Selects the exposure lamp voltage when auto process control is disabled or RAM is cleared. (0.5 V/step) **Default:** 65.0 V	Enter the data by using the number keys, then touch Adjust.
❷	Adjusts the transfer current. (1μA/step) **Default:** 40 μA	**Standard Data:** 40 mA Enter the data by using the number keys, then touch Adjust.
❸	Initializes the by-pass paper size sensor.	**Procedure:** 1. Set the by-pass table side fence to the A4/81/2 x 11 position, then touch the Enter key ①. 2. Set the by-pass table side fence to the A6/41/4 x 51/2 position, then touch the Enter key ②. Perform this mode when the by-pass paper size sensor is replaced.

1 SP ADJUSTMENT

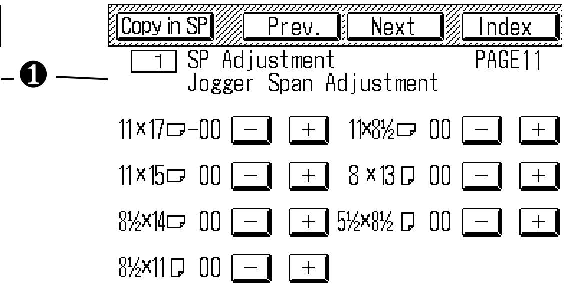
PAGE 10 A4/A3 VERSION **PAGE 11** LT/DLT VERSION



Copy in SP Prev. Next Index

1 SP Adjustment PAGE10
Jogger Span Adjustment

A3▭ -00 − + B5▭ 00 − +
B4▭ 00 − + B5▯ 00 − +
A4▭ 00 − + A5▯ 00 − +
A4▯ 00 − +



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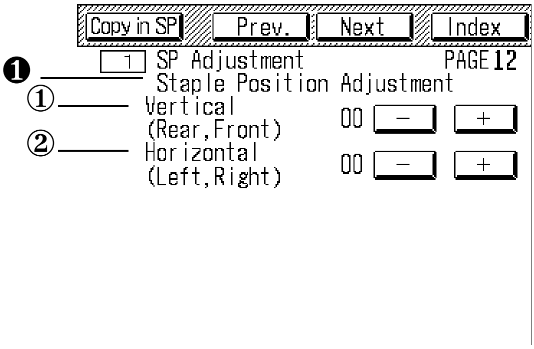
1 SP Adjustment PAGE11
Jogger Span Adjustment

11×17▭ -00 − + 11×8½▭ 00 − +
11×15▭ 00 − + 8×13▯ 00 − +
8½×14▭ 00 − + 5½×8½▯ 00 − +
8½×11▯ 00 − +

Item	Function	Note
❶	Adjusts the duplex jogger fence position for each paper size. (0.3 mm/step)	Press + to increase the distance in-between the side fences. Press – to decrease the distance in-between the side fences. **Procedure:** 1. Feed a sheet of paper to the duplex tray. 2. Take out the duplex unit. 3. Adjust the jogger fence position so that the distance between the fences becomes 1 mm wider than the paper width.

1 SP ADJUSTMENT

PAGE 12



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1 SP Adjustment PAGE12

Staple Position Adjustment

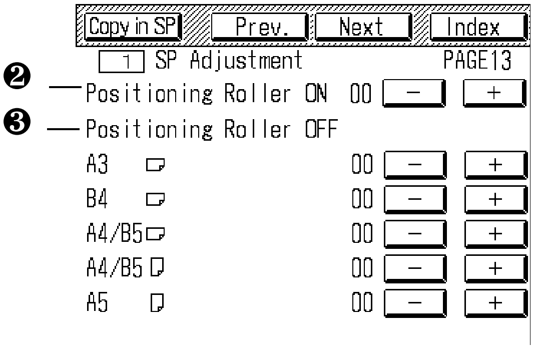
Vertical (Rear,Front) 00 − +

Horizontal (Left,Right) 00 − +

NOTE: PAGE 15 is for factory use only. PAGE 16 is an extra page, it is not used.

PAGE 13

A4/A3 VERSION



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1 SP Adjustment PAGE13

Positioning Roller ON 00 − +

Positioning Roller OFF

A3 ▭ 00 − +

B4 ▭ 00 − +

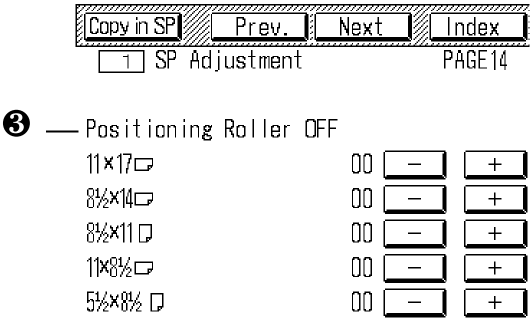
A4/B5 ▭ 00 − +

A4/B5 ▯ 00 − +

A5 ▯ 00 − +

PAGE 14

T/DLT VERSION



Copy in SP | Prev. | Next | Index

1 SP Adjustment PAGE14

Positioning Roller OFF

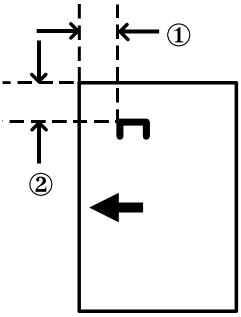
11×17 ▭ 00 − +

8½×14 ▭ 00 − +

8½×11 ▯ 00 − +

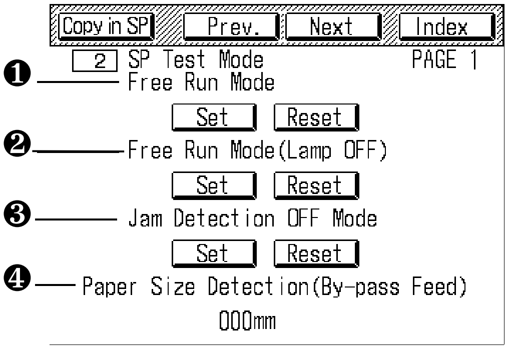
11×8½ ▭ 00 − +

5½×8½ ▯ 00 − +

Item	Function	Note
❶	Adjusts the staple position. ① Adjusts the vertical staple position. ② Adjusts the horizontal staple position. (0.5 mm/step) 	This mode affects only the A377 Sorter Stapler (horizontal and vertical) and the A379 Finisher (horizontal only).
❷	Changes the duplex positioning roller down timing for both A4/A3 and LT/DLT version machines.	
❸	Changes the duplex positioning roller up timing to adjust the paper buckle at the separation roller. (5 ms/step)	Adjusts the timing so that the paper leading edge just touches the separation belt without any buckle.

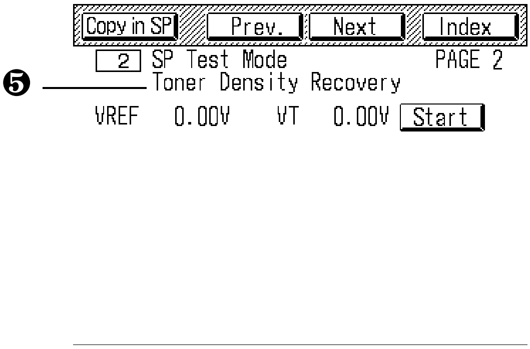
2 SP TEST MODE

PAGE 1



2 SP Test Mode PAGE 1
Free Run Mode
Free Run Mode(Lamp OFF)
Jam Detection OFF Mode
Paper Size Detection(By-pass Feed)
000mm

PAGE 2

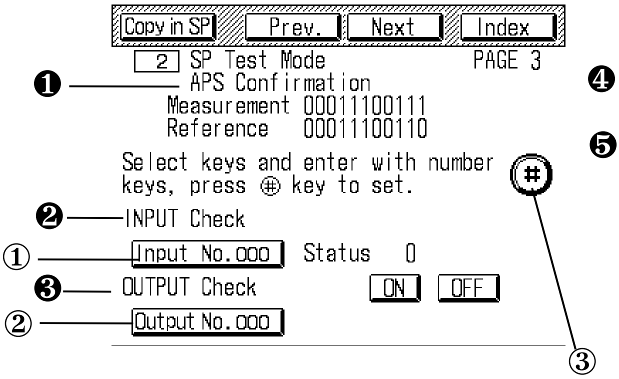


2 SP Test Mode PAGE 2
Toner Density Recovery
VREF 0.00V VT 0.00V

Item	Function	Note
❶	Operates the copier without feeding paper.	Place sheets of white paper (A3 or 11" x 17") on the exposure glass.
❷	Operates the copier without feeding paper or turning on the exposure lamp.	Do not operate the machine in this mode for a long time because a lot of toner is spent.
❸	Disables jam detection. (Not effective for peripherals)	This mode is only effective in the "Copy in SP" mode.
❹	Indicates the paper width detected by the by-pass paper size sensor.	
❺	Rotates the main and development motors and turns on the toner supply clutch to supply toner in the development unit. T.D. sensor toner supply target data (VREF) and detected data (VT) is indicated.	Toner is supplied under the following conditions. 1. Toner supply ratio: 25% 2. Repeats 0.5 sec ON and 1.5 sec, OFF. 3. Continues 30 sec. Check the image after this SP mode is completed.

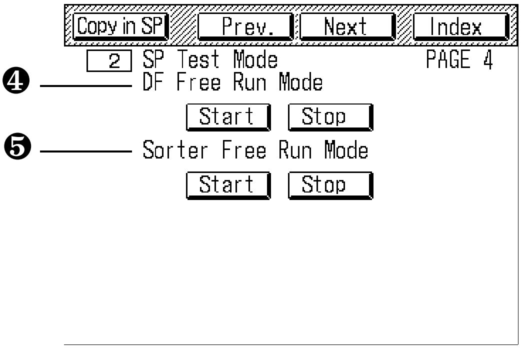
2 SP TEST MODE

PAGE 3



2 SP Test Mode PAGE 3
APS Confirmation
Measurement 00011100111
Reference 00011100110
Select keys and enter with number keys, press ⊕ key to set.
INPUT Check
Input No.000 Status 0
OUTPUT Check
Output No.000

PAGE 4

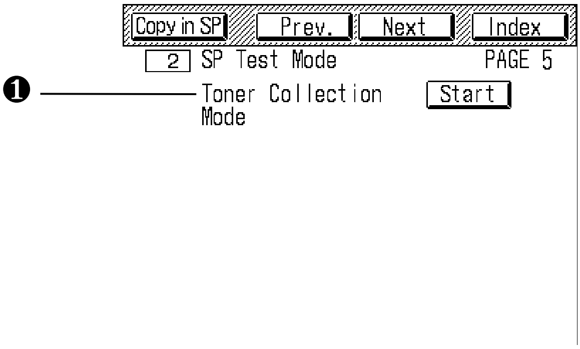


2 SP Test Mode PAGE 4
DF Free Run Mode
Sorter Free Run Mode

Item	Function	Note
❶	Use to check if the original size sensors are correctly activated and de-activated.	Status 0 ----- de-activated Status 1 ----- activated
❷	Use to check if the sensors or switches are correctly activated and de-activated. **Access this mode as follows:** 1. Touch the input mode key ①. 2. Enter the sensor/switch/signal number by using the number keys on the operation panel. (Refer to the input check mode on page 4-35) 3. Touch the enter key ③.	Status 0 ----- de-activated Status 1 ----- activated This mode cannot be used with the MATT20
❸	Use to confirm the proper function of the copier electrical components **Access this mode as follows:** 1. Touch the Output mode key ②. 2. Enter the electrical component number by using the number keys on the operation panel (Refer to the output check mode on page 4-41). 3. Press the enter key ③.	Touch ON to activate and touch OFF to de-activate the electrical component This mode cannot be used with the MATT20
❹	Operates the DF without the copier operation.	**Procedure:** 1. Set originals on the table. 2. Touch Start .
❺	Operates the sorter stapler (A374 and A377) or A379 finisher without copier operation.	The sorter operates as if 3 copies are made from five originals in sort and staple mode. No stapling is actually made.

2 SP TEST MODE

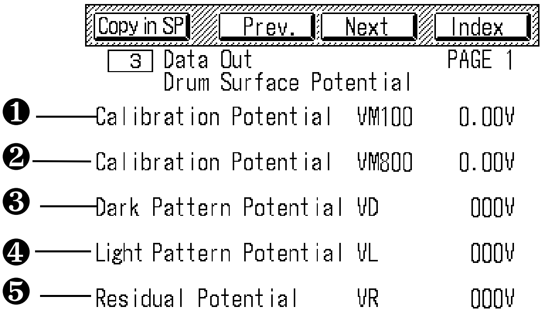
PAGE 5


Copy in SP
Prev.
Next
Index
2 SP Test Mode
PAGE 5
❶
Toner Collection Mode
Start

Item	Function	Note
❶	Operates the toner collection drive mechanism.	After touching the Start key, the toner collection motor turns on for 1 minute.

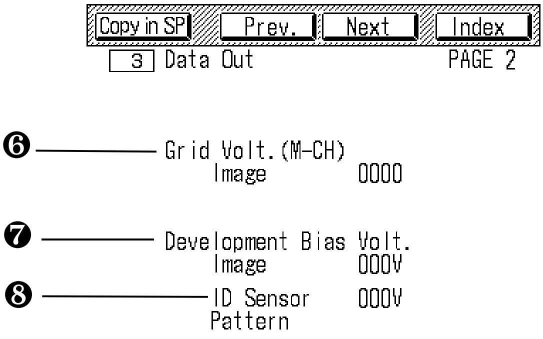
3 DATA OUT MODE

PAGE 1



3 Data Out PAGE 1
Drum Surface Potential
❶ Calibration Potential VM100 0.00V
❷ Calibration Potential VM800 0.00V
❸ Dark Pattern Potential VD 000V
❹ Light Pattern Potential VL 000V
❺ Residual Potential VR 000V

PAGE 2



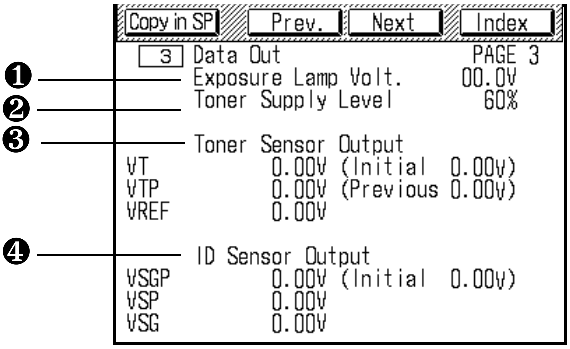
3 Data Out PAGE 2
❻ Grid Volt.(M-CH) Image 0000
❼ Development Bias Volt. Image 000V
❽ ID Sensor Pattern 000V

Item	Function	Note
❶	Indicates the drum potential sensor output when –100 V is applied to the OPC drum.	**Standard data:** 0.1 ~ 0.7 V
❷	Indicates the drum potential sensor output when –800 V is applied to the OPC drum.	**Standard data:** 2.7 V ~ 4.2 V
❸	Indicates the drum potential when detecting the VD pattern.	**Standard data:** VR +770 ± 20 V
❹	Indicates the drum potential when detecting the VL pattern.	**Standard data:** VR +140 ± 20V
❺	Indicates the drum potential when detecting the bare drum surface.	**Standard data:** 0 ~ 200 V
❻	Indicates the charge grid bias voltage decided during process control data initial setting.	Works only when auto process control is enabled. (1 SP Adjustment – PAGE 7) **Standard data:** 870 ~ 1,200 V
❼	Indicates the development bias voltage decided during process control data initial setting.	Works only when auto process control is enabled. (1 SP Adjustment – PAGE 7) **Standard data:** VR -220 V
❽	Indicates the ID sensor bias voltage decided during process control data initial setting.	Works only when auto process control is enabled. (1 SP Adjustment – PAGE 7) **Standard data:** 300 V ~ 400 V

NOTE: ❸ ~ ❺ are absolute value.

3 DATA OUT MODE

PAGE 3

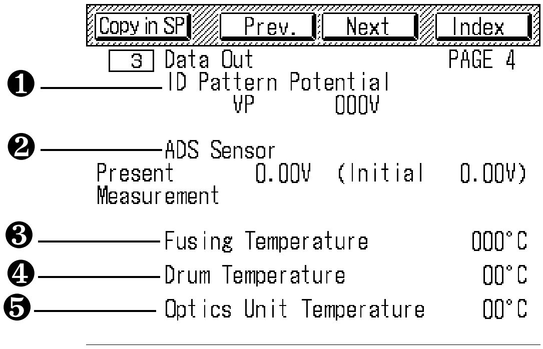


```
 3  Data Out                       PAGE 3
    Exposure Lamp Volt.       00.0V
    Toner Supply Level          60%

    Toner Sensor Output
VT          0.00V (Initial  0.00V)
VTP         0.00V (Previous 0.00V)
VREF        0.00V

    ID Sensor Output
VSGP        0.00V (Initial  0.00V)
VSP         0.00V
VSG         0.00V
```

Item	Function	Note
❶	Indicates the exposure lamp voltage (ID Level 4) decided during process control data initial setting.	Works only when the auto process control is enabled (1 SP Adjustment - PAGE 7.) **Standard data:** 50 ~ 80 V
❷	Indicates the toner supply level by image area ratio on an original surface. This data changes at every copy through fuzzy control.	
❸	Indicates the TD sensor output: VT: Current detected data Initial: TD sensor output at last process control data initial setting. Previous: Previous detected data during ID sensor compensation. VTP: Last detected data during ID sensor compensation. VREF: Toner supply level target data.	**Standard data:** 0.5 ~ 4.0 V
❹	Indicates the ID sensor output VSGP: ID sensor output while detecting the bare drum surface (with dev. bias and development roller rotation) VSP: ID sensor output while detecting the ID sensor pattern image VSG: ID sensor output while detecting the bare drum surface (without development bias and without development roller rotation)	VSGP is not used for auto image density control. **Abnormal condition:** V_{SGP} < 2.5 V V_{SP} > 2.5 V V_{SG} < 2.5 V

3 DATA OUT MODE

PAGE 4

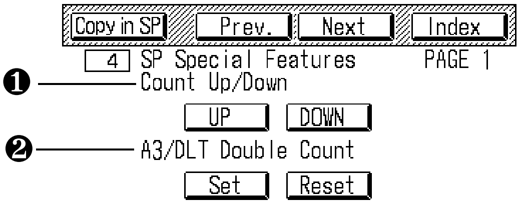


3 Data Out PAGE 4
ID Pattern Potential
VP 000V
ADS Sensor
Present 0.00V (Initial 0.00V)
Measurement
Fusing Temperature 000°C
Drum Temperature 00°C
Optics Unit Temperature 00°C

Item	Function	Note
❶	Indicates the drum potential while detecting ID sensor pattern (grid voltage = – 700 V)	**Standard data:** 600 ~ 700 V
❷	Indicates the ADS sensor output at every scan.	**Standard data:** 2.7 ± 0.1 V Present: Output at last detection. Initial: Output at ID sensor initial setting.
❸	Indicates the fusing temperature based on the fusing thermistor output.	**Standard data:** Around 185°C
❹	Indicates the drum temperature based on the drum thermistor output.	
❺	Indicates the optics temperature based on the optics thermistor output.	

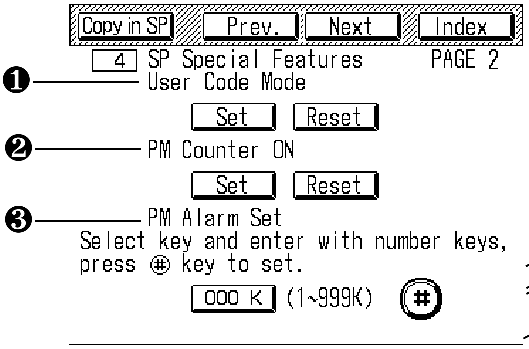
4 SP SPECIAL FEATURES

PAGE 1


Copy in SP
Prev.
Next
Index
4 SP Special Features
PAGE 1
❶
Count Up/Down
UP
DOWN
❷
A3/DLT Double Count
Set
Reset

Item	Function	Setting		Default
❶	Selects copy count up or down.	Set	Count up	Reset
		Reset	Count down	
❷	Counts twice when an A3 or 11" x 17" copy is made.	Set	Count twice	Reset
		Reset	Count once	

PAGE 2



[Copy in SP] [Prev.] [Next] [Index]

[4] SP Special Features PAGE 2

❶ User Code Mode

[Set] [Reset]

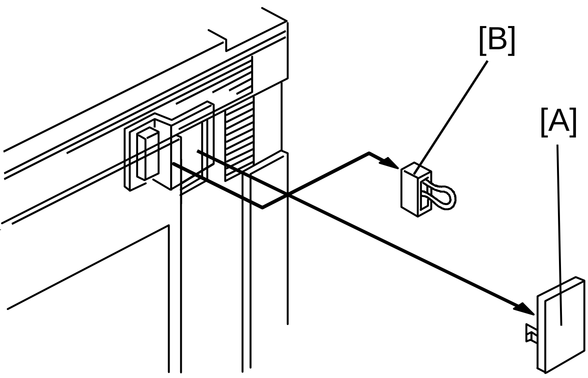
❷ PM Counter ON

[Set] [Reset]

❸ PM Alarm Set

Select key and enter with number keys, press # key to set.

[000 K] (1~999K) #



Item	Function	Setting		Default
❶	Enables user code mode. * See the NOTE below.	Set Reset	Enable Disable	Reset
❷	Enables the PM alarm.	Set Reset	Enable Disable	Reset
❸	Selects the PM alarm interval after counter clear ([9] PM Counter Clear - PAGE 1)			120 K

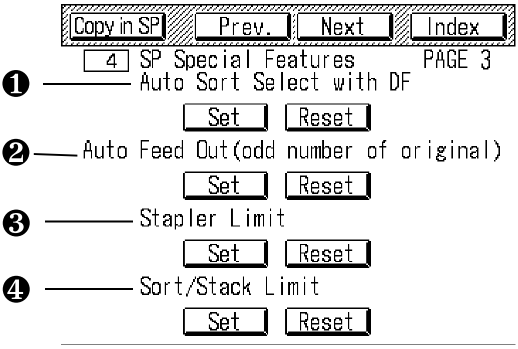
NOTE: To enable user code mode, perform the following procedure.

CAUTION: When [Set] is selected, at least one user code should be entered.

1. Register the user code by using user tool No.6.
2. Enter SP mode then enable the user code mode by selecting [Set].
3. Turn off the main switch.
4. Remove the plastic cap [A] on the right upper cover.
5. Disconnect the key counter short-circuit connector [B].
6. Return the plastic cap [A].
7. Turn on the main switch and check the operation.

4 SP SPECIAL FEATURES

PAGE 3



4 SP Special Features PAGE 3

❶ Auto Sort Select with DF

❷ Auto Feed Out(odd number of original)

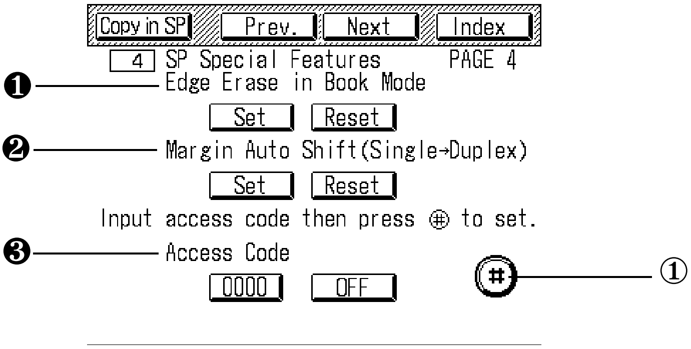
❸ Stapler Limit

❹ Sort/Stack Limit

Item	Function	Setting		Default
❶	Enables automatic sort mode selection when 2 or more is entered in the copy counter and an original is set on the DJF feed tray.	Set Reset	Enable Disable	Set
❷	Enables automatic feed-out of the last copy on the duplex tray without copying when an odd number of originals is set on the DJF feed tray.	Set Reset	Enable Disable	Set
❸	Cancels the maximum copy quantity limit (50) in staple mode.	Set Reset	Limit No limit	Set
❹	Cancels the maximum copy quantity limit in sort mode (50) and in stack mode (40).	Set Reset	Limit No limit	Reset

4 SP SPECIAL FEATURES

PAGE 4



4 SP Special Features PAGE 4

Edge Erase in Book Mode

Margin Auto Shift(Single→Duplex)

Input access code then press ⊕ to set.

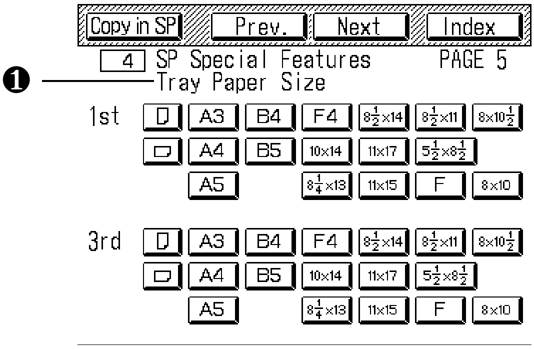
Access Code

Item	Function	Setting		Default
❶	Enables automatic access to the border/center erase mode in platen cover mode.	Set Reset	Enable Disable	Reset
❷	Enables automatic selection of a right margin (5 mm, 0.2") for the duplex back side when making 2 sided copies from 1 sided originals.	Set Reset	Enable Disable	Reset
❸	Limits user access to User Tools No. 10 and 11 to only those who know the access code. Procedure: 1. Touch the 0000 Key. 2. Input the access code with the number keys. 3. Touch the enter key ①. *See the caution below.	Set Reset	Limit No limit	Reset

CAUTION: After enabling this mode, be sure to instruct the key operator not to forget the access code.

4 SP SPECIAL FEATURES

PAGE 5, 6


Copy in SP
Prev.
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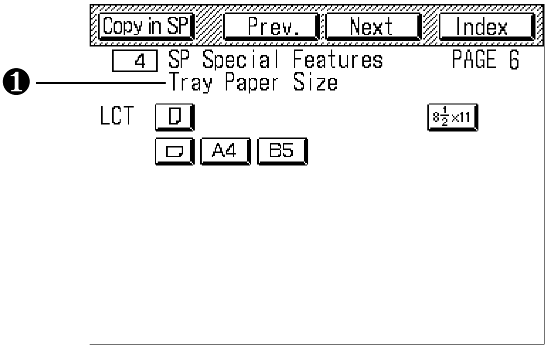
Index
4 SP Special Features PAGE 5
❶
Tray Paper Size
1st
A3
B4
F4
8 1/2x14
8 1/2x11
8x10 1/2
A4
B5
10x14
11x17
5 1/2x8 1/2
A5
8 1/4x13
11x15
F
8x10
3rd
A3
B4
F4
8 1/2x14
8 1/2x11
8x10 1/2
A4
B5
10x14
11x17
5 1/2x8 1/2
A5
8 1/4x13
11x15
F
8x10


Copy in SP
Prev.
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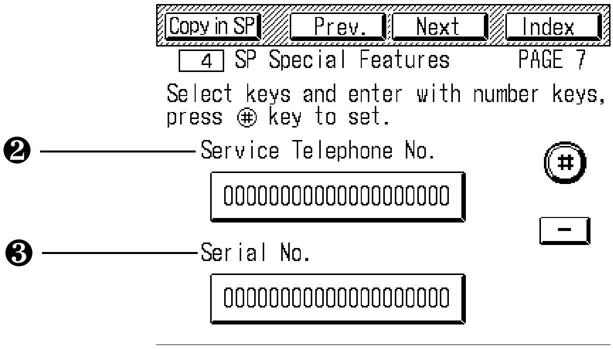
Index
4 SP Special Features PAGE 6
❶
Tray Paper Size
LCT
8 1/2x11
A4
B5

PAGE 7


Copy in SP
Prev.
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Index
4 SP Special Features PAGE 7
❷
❸
#
−

Select keys and enter with number keys, press # key to set.

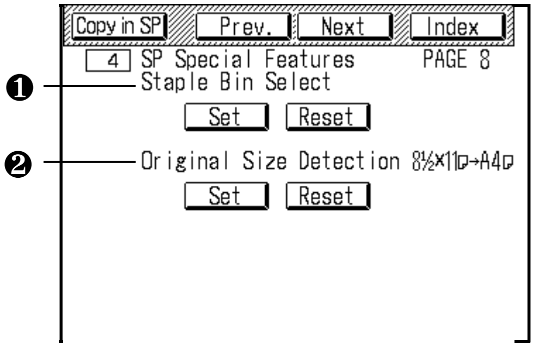
Service Telephone No.: 0000000000000000000000

Serial No.: 0000000000000000000000

Item	Function	Note
❶	Selects the paper size of each paper feed station. Refer to section 3 for details of the paper size change procedure.	1. Default is A4 or 8 1/2 x 11 sideways.
❷	Holds the service center telephone number. This telephone number is indicated on the LCD with the SC number when a problem occurs.	**Entering procedure:** 1. Touch the 00000000000000000000 2. Enter the phone number by pressing the number keys. (Touch − to enter the hyphen) 3. Touch #.
❸	Holds the copier's serial number.	

4 SP SPECIAL FEATURES

PAGE 8

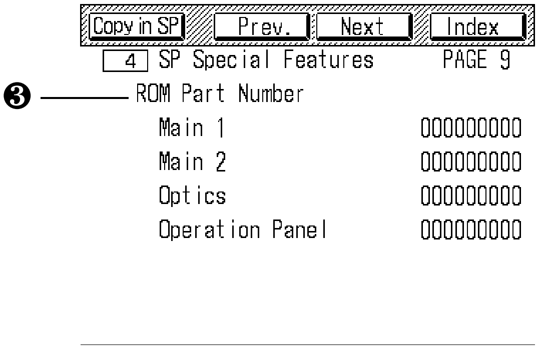


4 SP Special Features PAGE 8

Staple Bin Select

Original Size Detection 8½×11▭→A4▭

PAGE 9



4 SP Special Features PAGE 9

ROM Part Number

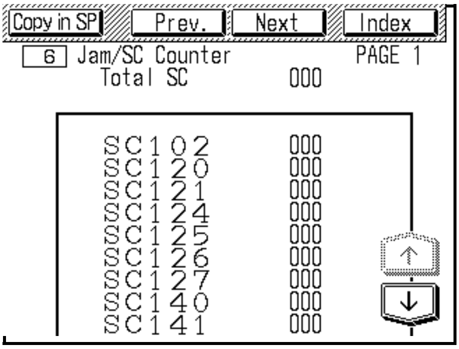
Main 1	000000000
Main 2	000000000
Optics	000000000
Operation Panel	000000000

Item	Function	Setting		Default
❶	Selects the staple mode for the 1st job when the staple mode is selected for the 2nd job in the pre-set mode.	Set Reset	Enable Disable	Reset
❷	The original size detection system for this model cannot distinguish between A4 and 81/2 x 11. This mode enables recognition of A4 and 81/2 x 11originals as A4 size for the A4/A3 version as 81/2 x 11 for the LT/DLT version.	Set Reset	Enable Disable	Reset
❸	Indicates the part number, with ROM suffixes, on each PCB. *See NOTE below.			

NOTE: Only the produced date is indicated for the operation panel (guidance) ROMs.

6 JAM/SC COUNTER

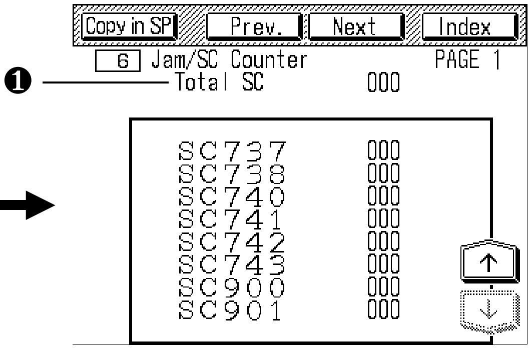
PAGE 1



6 Jam/SC Counter PAGE 1

Total SC 000

SC102	000
SC120	000
SC121	000
SC124	000
SC125	000
SC126	000
SC127	000
SC140	000
SC141	000



6 Jam/SC Counter PAGE 1

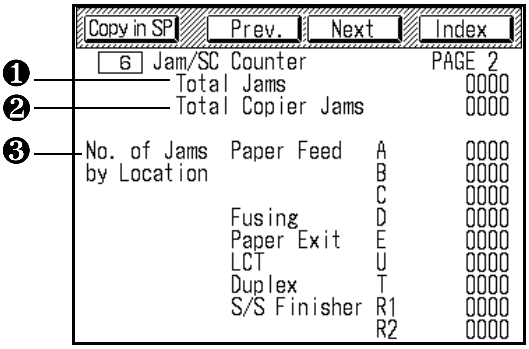
Total SC 000

SC737	000
SC738	000
SC740	000
SC741	000
SC742	000
SC743	000
SC900	000
SC901	000

Item	Function	Note
❶	Indicates the total number of occurrences of each SC code.	Press ↑ to scroll up. Press ↓ to scroll down. See Section 6 for details of each SC code. The counters for SCs that have not occurred are not displayed.

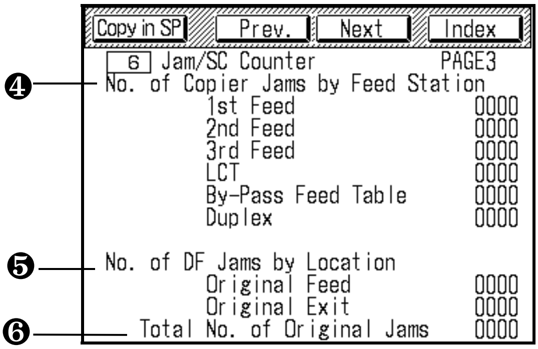
6 JAM/SC COUNTER

PAGE 2

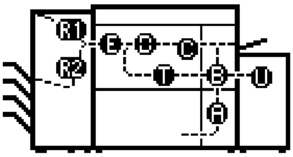


```
 6  Jam/SC Counter                    PAGE 2
        Total Jams                      0000
        Total Copier Jams               0000

No. of Jams    Paper Feed    A          0000
by Location                  B          0000
                             C          0000
               Fusing        D          0000
               Paper Exit    E          0000
               LCT           U          0000
               Duplex        T          0000
               S/S Finisher  R1         0000
                             R2         0000
```

PAGE 3

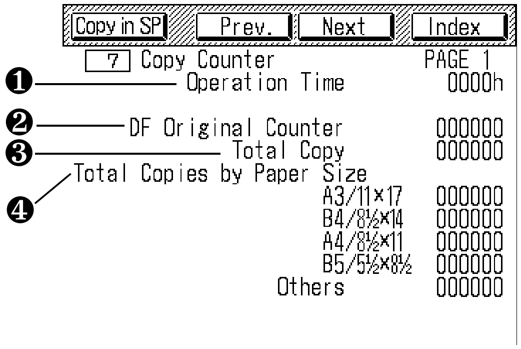


```
 6  Jam/SC Counter                       PAGE3
No. of Copier Jams by Feed Station
              1st Feed                    0000
              2nd Feed                    0000
              3rd Feed                    0000
              LCT                         0000
              By-Pass Feed Table          0000
              Duplex                      0000

No. of DF Jams by Location
              Original Feed               0000
              Original Exit               0000
   Total No. of Original Jams             0000
```

Item	Function	Note
❶	Indicates the total number of jams in the copier and all peripherals.	
❷	Indicates the total number of jams in the copier only.	
❸	Indicates the total number of jams at each location.	**Locations:** 
❹	Indicates the total number of jams for each feed station.	
❺	Indicates the total number of jams at each location in the DF.	
❻	Indicates the total number of jams in the DF.	

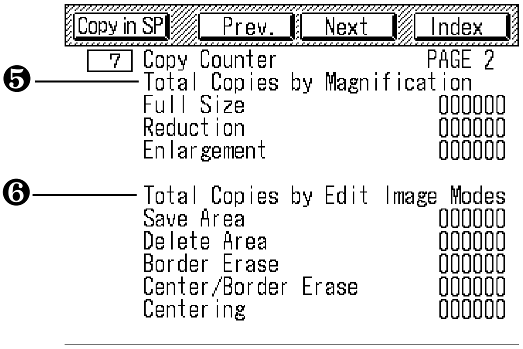
7 COPY COUNTER

PAGE 1



7 Copy Counter PAGE 1
Operation Time 0000h
DF Original Counter 000000
Total Copy 000000
Total Copies by Paper Size
A3/11×17 000000
B4/8½×14 000000
A4/8½×11 000000
B5/5½×8½ 000000
Others 000000

PAGE 2



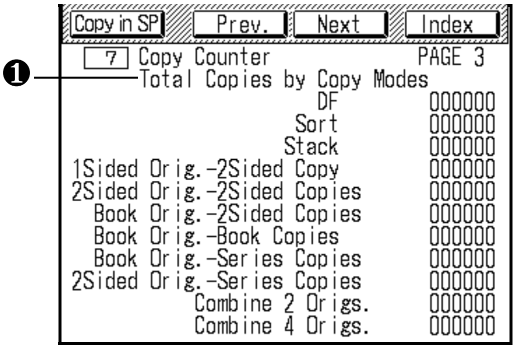
7 Copy Counter PAGE 2
Total Copies by Magnification
Full Size 000000
Reduction 000000
Enlargement 000000

Total Copies by Edit Image Modes
Save Area 000000
Delete Area 000000
Border Erase 000000
Center/Border Erase 000000
Centering 000000

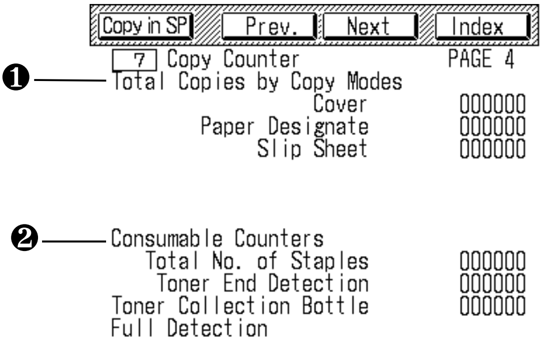
Item	Function	Note
❶	Indicates the total main motor rotation time.	
❷	Indicates the total number of originals fed by the DF.	
❸	Indicates the total number of copies.	
❹	Indicates the total number of copies for each paper size.	
❺	Indicates the total number of copies for each magnification.	
❻	Indicates the total number of copies for each edit image mode.	

7 COPY COUNTER

PAGE 3, 4

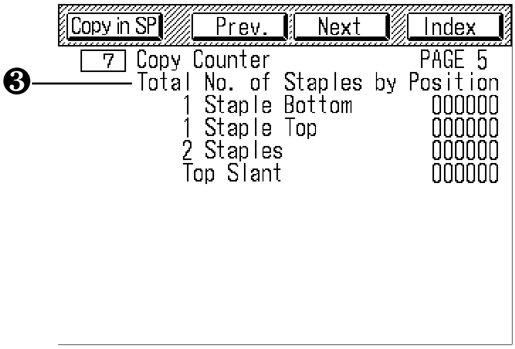


```
 7  Copy Counter                PAGE 3
Total Copies by Copy Modes
                      DF        000000
                    Sort        000000
                   Stack        000000
1Sided Orig.-2Sided Copy        000000
2Sided Orig.-2Sided Copies      000000
  Book Orig.-2Sided Copies      000000
  Book Orig.-Book Copies        000000
  Book Orig.-Series Copies      000000
2Sided Orig.-Series Copies      000000
            Combine 2 Origs.    000000
            Combine 4 Origs.    000000
```



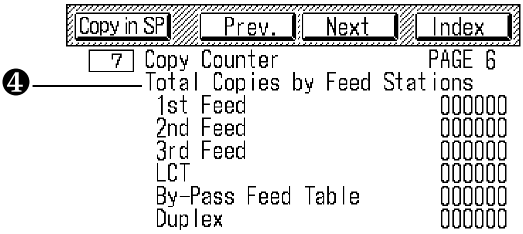
```
 7  Copy Counter                PAGE 4
Total Copies by Copy Modes
                      Cover     000000
            Paper Designate     000000
                 Slip Sheet     000000


Consumable Counters
   Total No. of Staples         000000
    Toner End Detection         000000
Toner Collection Bottle         000000
Full Detection
```

PAGE 5



```
 7  Copy Counter                PAGE 5
Total No. of Staples by Position
    1 Staple Bottom             000000
    1 Staple Top                000000
    2 Staples                   000000
    Top Slant                   000000
```

PAGE 6

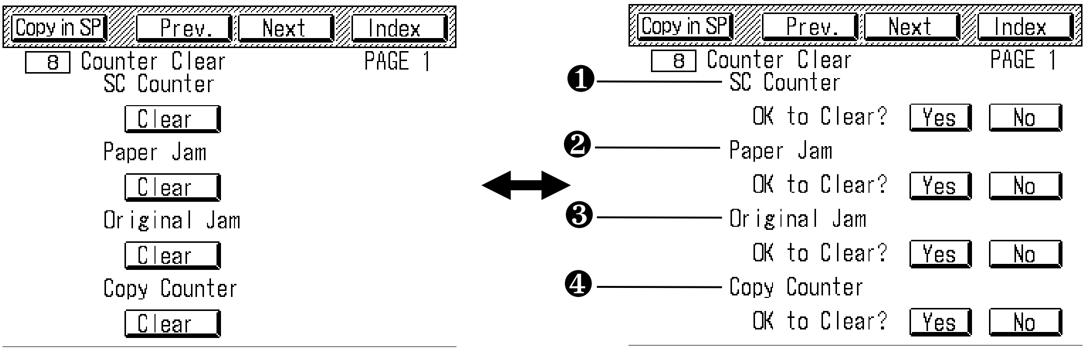


```
 7  Copy Counter                PAGE 6
Total Copies by Feed Stations
  1st Feed                      000000
  2nd Feed                      000000
  3rd Feed                      000000
  LCT                           000000
  By-Pass Feed Table            000000
  Duplex                        000000
```

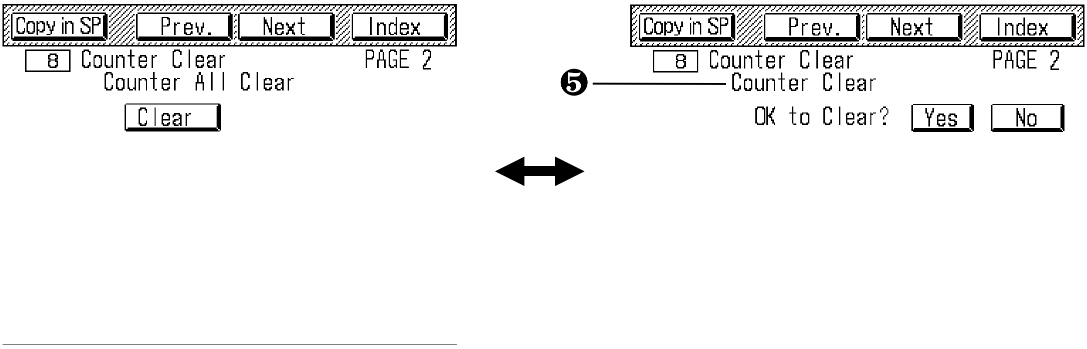
Item	Function	Note
❶	Indicates the total number of the copies for each copy mode.	
❷	Indicates the total number related to consumables.	
❸	Indicates the total number of staples for each staple position.	
❹	Indicates the total number of copies broken down by paper feed station.	

8 COUNTER CLEAR

PAGE 1


Copy in SP
Prev.
Next
Index
8 Counter Clear
PAGE 1
SC Counter
Clear
Paper Jam
Clear
Original Jam
Clear
Copy Counter
Clear
❶
❷
❸
❹
OK to Clear?
Yes
No

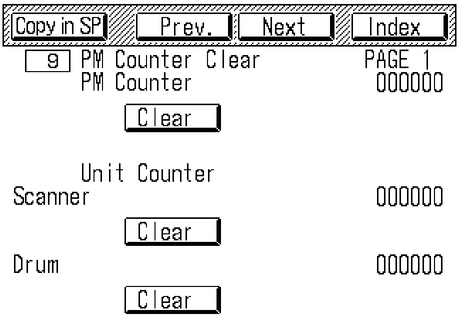
PAGE 2


Copy in SP
Prev.
Next
Index
8 Counter Clear
PAGE 2
Counter All Clear
Clear
❺
Counter Clear
OK to Clear?
Yes
No

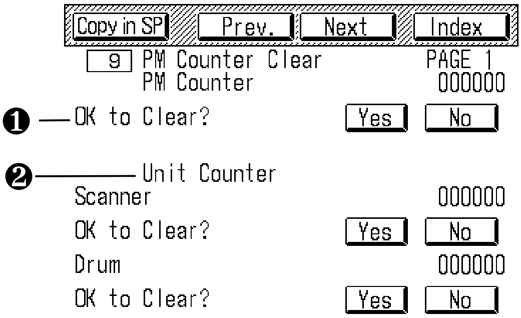
Item	Function	Note
❶	Clears all SC counters.	**Procedure to clear:** 1. Touch Clear . The display changes as shown at right. 2. Touch Yes. (Touch No to cancel.) The display returns to the one shown at left and the beeper sounds four times.
❷	Clears all paper jam counters.	
❸	Clears all original jam counters.	
❹	Clears all copy counters.	
❺	Clears all counters (❶ ~ ❹).	

9 PM COUNTER CLEAR

PAGE 1

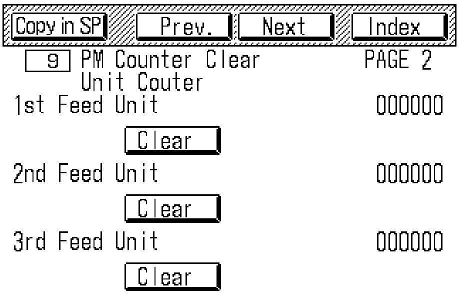

Copy in SP
Prev.
Next
Index
Clear
Clear
Clear

9 PM Counter Clear PAGE 1
PM Counter 000000
Unit Counter
Scanner 000000
Drum 000000

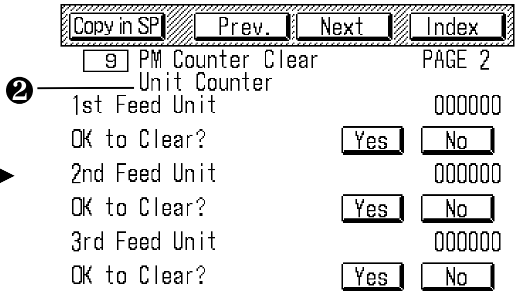

Copy in SP
Prev.
Next
Index
❶
❷
Yes
No
Yes
No
Yes
No

9 PM Counter Clear PAGE 1
PM Counter 000000
OK to Clear?
Unit Counter
Scanner 000000
OK to Clear?
Drum 000000
OK to Clear?

PAGE 2


Copy in SP
Prev.
Next
Index
Clear
Clear
Clear

9 PM Counter Clear PAGE 2
Unit Couter
1st Feed Unit 000000
2nd Feed Unit 000000
3rd Feed Unit 000000

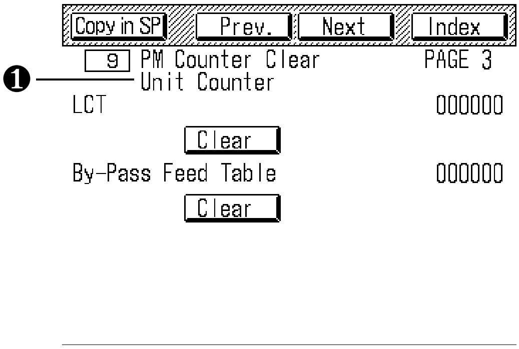

Copy in SP
Prev.
Next
Index
❷
Yes
No
Yes
No
Yes
No

9 PM Counter Clear PAGE 2
Unit Counter
1st Feed Unit 000000
OK to Clear?
2nd Feed Unit 000000
OK to Clear?
3rd Feed Unit 000000
OK to Clear?

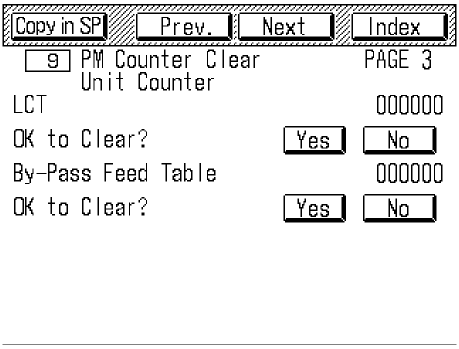
Item	Function	Note
❶	1. Indicates the total number of copies since the last PM (PM counter). 2. Clears the PM counter.	**Procedure to clear:** 1. Touch Clear . The display changes as shown at right. 2. Touch Yes. (Touch No to cancel.) The display returns to the one shown at left.
❷	1. Indicates the total number of copies since the last PM for each unit (unit counter). 2. Clears each unit counter.	

9 PM COUNTER CLEAR

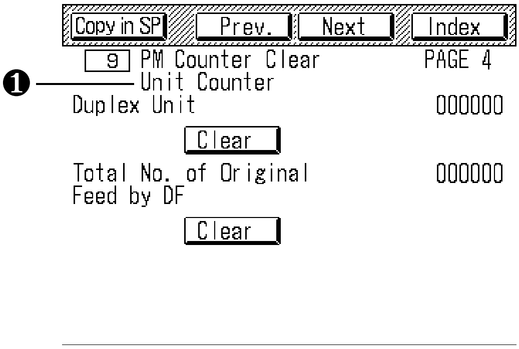
PAGE 3, 4


Copy in SP
Prev.
Next
Index
❶

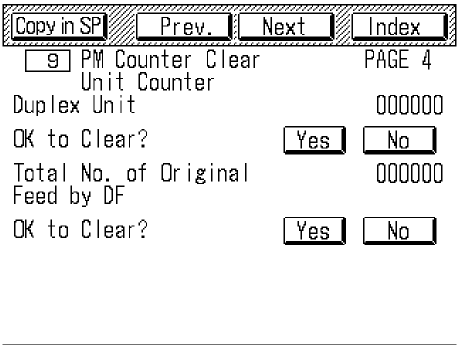
9 PM Counter Clear PAGE 3
Unit Counter
LCT 000000
Clear
By-Pass Feed Table 000000
Clear


Copy in SP
Prev.
Next
Index

9 PM Counter Clear PAGE 3
Unit Counter
LCT 000000
OK to Clear?
Yes
No
By-Pass Feed Table 000000
OK to Clear?
Yes
No


Copy in SP
Prev.
Next
Index
❶

9 PM Counter Clear PAGE 4
Unit Counter
Duplex Unit 000000
Clear
Total No. of Original Feed by DF 000000
Clear

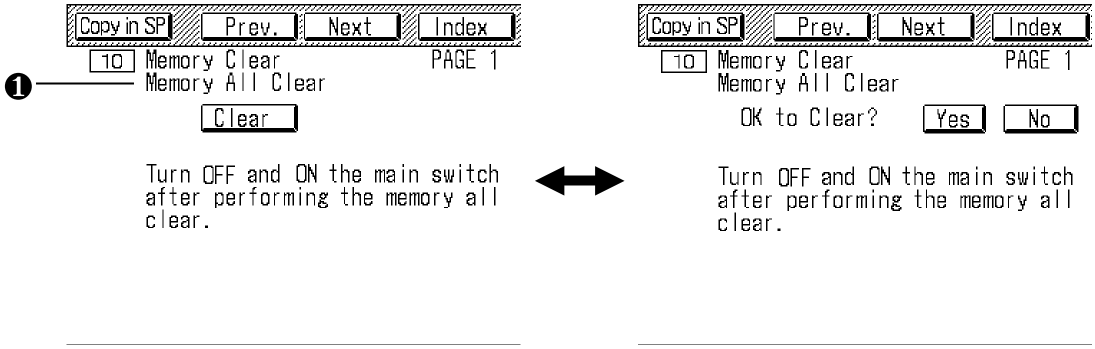

Copy in SP
Prev.
Next
Index

9 PM Counter Clear PAGE 4
Unit Counter
Duplex Unit 000000
OK to Clear?
Yes
No
Total No. of Original Feed by DF 000000
OK to Clear?
Yes
No

Item	Function	Note
❶	1. Indicates the total number of copies since the last PM for each unit. (unit counter) 2. Clears each unit counter.	**Procedure to clear:** 1. Touch Clear . The display changes as shown at right. 2. Touch Yes. (Touch No to cancel.) The display returns to the one shown at left.

10 MEMORY CLEAR

PAGE 1


❶
Copy in SP
Prev.
Next
Index
10 Memory Clear
PAGE 1
Memory All Clear
Clear
OK to Clear?
Yes
No

Turn OFF and ON the main switch after performing the memory all clear.

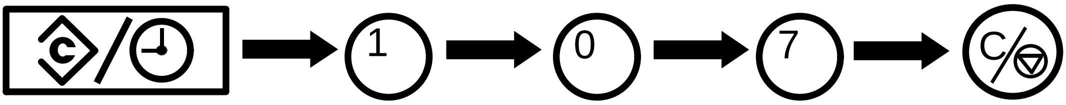
Turn OFF and ON the main switch after performing the memory all clear.

Item	Function	Note
❶	Returns all data to the default data.	**Procedure to clear:** 1. Touch Clear . The display changes as shown at right. 2. Touch Yes. (Touch No to cancel.) The display returns to the one shown at left and the beeper sounds twice. 3. Turn the main switch off and on.

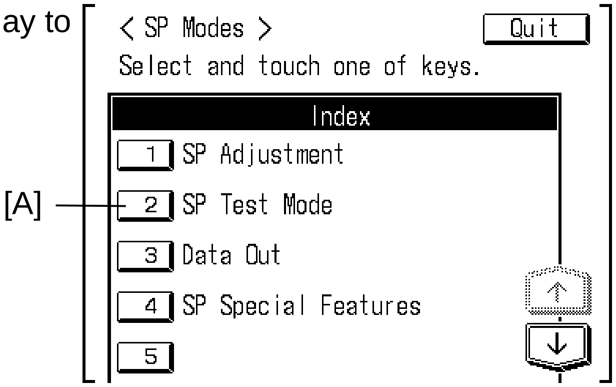
2.3 SENSOR/SWITCH/SIGNAL DATA CHECK (INPUT MODE)

– How to check the sensor/switch/signal –

1. Enter SP mode as follows:
   1) Press the mode clear key.
   2) Enter "107"
   3) Press the clear/stop key for more than 3 seconds.



2. Touch [2] [A] on the display to access SP test mode.

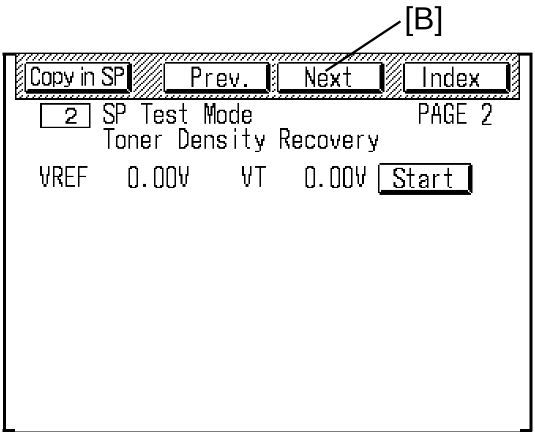


< SP Modes > Quit
Select and touch one of keys.

Index

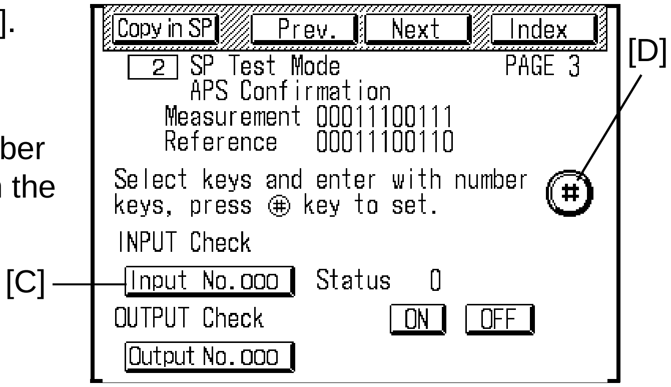
1 SP Adjustment
2 SP Test Mode
3 Data Out
4 SP Special Features
5

3. Touch [Next] [B] on the display twice.



2 SP Test Mode PAGE 2
Toner Density Recovery
VREF 0.00V VT 0.00V Start

4. 1) Touch [Input No. 00] [C].
   2) Enter the input sensor/switch/signal number by using the number keys (Refer to the table in the following pages).
   3) Press the Enter key [D].



2 SP Test Mode PAGE 3
APS Confirmation
Measurement 00011100111
Reference 00011100110

Select keys and enter with number keys, press ⊕ key to set.

INPUT Check
Input No.000 Status 0
OUTPUT Check ON OFF
Output No.000

Input No	Sensor/Switch/|Signal	Status	
		0	1
1	Registration Sensor	Paper not detected	Paper detected
2	Fusing Exit Sensor	Paper not detected	Paper detected
3	Exit Sensor	Paper not detected	Paper detected
4	Vertical Transport Sensor	Paper not detected	Paper detected
5	1st Tray Set Switch (A095 only)	Not set	Set
6	By-Pass Paper End Sensor	Paper detected	Paper not detected
7	2nd Paper End	Paper detected	Paper not detected
8	3rd Paper End	Paper detected	Paper not detected
9	Built-in LCT Tray Down Key	Pressed	Not pressed
10	2nd Paper Near End Sensor	Not near end	Near end
11	3rd Paper Near End Sensor	Not near end	Near end
12	Built-in LCT Paper Set	Paper not detected	Paper detected
13	2nd Paper Size Switch (All SW)	Set	Not Set
14	2nd Tray Set Detection	Not set	Set
15	3rd Tray Set Switch (A095 only)	Not set	Set
16	Built-in LCT Set Detection	Not set	Set
17	1st Paper Feed Sensor	Paper not detected	Paper detected
18	2nd Paper Feed Sensor	Paper not detected	Paper detected
19	3rd Paper Feed Sensor	Paper not detected	Paper detected
20	Not Used	—	—
21	2nd Lift Sensor	Not lifted	Lifted
22	3rd Lift Sensor	Not lifted	Lifted
23	Built-in LCT Tray Down Sensor	Tray at down	Tray not down
24	Fusing Set Detection.	Not set	Set
25	Drum Unit Set Detection	Not set	Set
26	Right Tandem Paper End Sensor	Paper detected	Paper not detected
27	Left Tandem Paper End Sensor	Paper detected	Paper not detected
28	Right Tandem Tray Set Detection	Not set	Set
29	Left Tandem Tray Set Detection	Not set	Set
30	Rear Fence Return Sensor	Not at return position	At return position
31	Rear Fence HP. Sensor	Not at HP	At HP
32	Base Plate Down Sensor (Tandem)	Not down	Down
33	1st Paper Near End Sensor	Not at near end	Near end
34	1st Lift Sensor	Not lifted	Lifted
35	Side Fence HP. Sensor	At HP	Not at HP
36	3.5 K LCT Paper End Sensor	Paper detected	Paper not detected
37	3.5 K LCT Set Detection	Not set	Set

Input No	Sensor/Switch/|Signal	Status	
		0	1
38	3.5 K LCT Lift Sensor	Not lifted	Lifted
39	3.5 K LCT Tray Down Key	Not pressed	Pressed
40	3.5 K LCT Feed Sensor	Paper not detected	Paper detected
41	3.5 K LCT Tray Down Sensor	Tray not down	Tray down
42	3.5 K LCT Door Switches	Closed	Open
43	3.5 K LCT Paper Position Sensor	Paper not detected	Paper detected
44	Duplex Jogger HP Sensor	Not at HP	At HP
45	Duplex Entrance Sensor	Paper not detected	Paper detected
46	Duplex Transport Sensor	Paper not detected	Paper detected
47	Duplex Exit Sensor	Paper not detected	Paper detected
48	Duplex Unit Set Detection	Not set	Set
49	Duplex Paper End Sensor	Paper not detected	Paper detected
50	Toner End Sensor	Toner present	No toner
51	Toner Overflow Switch	No overflow	Overflow
52	By-Pass Table Switch	Closed	Open
53	Front Door Safety Switch	Closed	Open
54	Toner Collection Bottle Set Switch	Set	Not set
55	By-Pass Feed Motor Lock Detection	Not detected	Detected
56	Development Motor Lock Detection	Not detected	Detected
57	Main Motor Lock Detection	Not detected	Detected
58	Not used	—	—
59	Paper Feed motor Lock Detection	Not detected	Detected
60	Fusing/Duplex Drive Motor Lock Detection	Not detected	Detected
61	By-pass Paper Feed Motor Lock Detection	Not detected	Detected
62	Duplex Paper Guide Sensor	Paper not detected	Paper detected
63	Not used	—	—
64	Not used	—	—
65	3.5 K LCT Paper Near End Sensor	Paper detected	Paper not detected (Near end)
66	Guide Plate Position Sensor	Closed	Open
67	3.5 K LCT Motor Lock	Not detected	Detected
Input No 68 ~ 90 are not used.			
91	Auto Response Sensor	Not detected	Detected
92	Key Counter Connector	Open	Short
Input No 93 ~ 100 are not used.			

Input No	**Sensor/Switch/|Signal**	**Status**	
		0	1
101	Entrance Sensor (A377 S/S)	Paper detected	Paper not detected
	Entrance Sensor (Finisher)	Paper detected	Paper not detected
102	Proof Exit Sensor (A377 S/S)	Paper detected	Paper not detected
	Exit Sensor (Finisher)	Paper detected	Paper not detected
103	Jam Sensor (Photo transistor) (A377 S/S)	Paper detected	Paper not detected
	Shift Tray Half Turn Sensor (Finisher)	At HP	Not at HP
104	Bin Sensor (Photo transistor) (A377 S/S)	Paper detected	Paper not detected
	Stack Height Sensor 2 (Finisher)	At HP	Not at HP
105	Bin HP. Sensor (A377 S/S)	Not at HP	At HP
	Stack Height Sensor 1 (Finisher)	Not at HP	At HP
106	Wheel Sensor (A377 S/S)	Not interrupted	Interrupted
	Shift Tray Lower Limit Sensor (Finisher)	At lowest position	Not at lowest position
107	Bin Rear Plate Release Sensor (A377 S/S)	Not at release position	At release position
	Jogger Unit Entrance Sensor (Finisher)	Paper detected	Paper not detected
108	Bin Rear Plate HP. Sensor (A377 S/S)	Not at HP	At HP
	Jogger Unit Paper Sensor (Finisher)	Paper not detected	Paper detected
109	Jogger HP. Sensor (A377 S/S)	Not at HP	At HP
	Jogger HP. Sensor (Finisher)	Not at HP	At HP
110	Grip HP. Sensor (A377 S/S)	Not at HP	At HP
	Staple Unit HP. Sensor (Finisher)	Not at HP	At HP
111	Staple Unit HP. Sensor (A377 S/S)	Not at HP	At HP
	Stack Feed-out Belt HP. Sensor (Finisher)	At HP	Not at HP
112	Staple HP. Sensor	At HP	Not at HP
	Staple Hammer HP Sensor (Finisher)	At HP	Not at HP
113	Staple End Sensor (A377 S/S)	Present	Empty
	Staple End Sensor (Finisher)	At HP	Not at HP
114	Paper Sensor (A377 S/S)	Paper detected	Paper not detected
	Not Used	—	—
115	Door Safety Switch (A377 S/S)	Closed	Open
	Front Door Safety Switch	Closed	Open
116	Sorter Main Motor Encoder (A377 S/S)	—	—

Input No	Sensor/Switch/|Signal	Status	
		0	1
Input No 117 ~ 130 are not used.			
131	Scanner HP. Sensor	Not at HP	At HP
132	Lens vertical HP. Sensor	At HP	Not at HP
133	Lens Horizontal HP. Sensor	At HP	Not at HP
134	3rd Scanner HP. Sensor	Not at HP	At HP
135	Platen Cover Position Sensor 1	Not interrupted	Interrupted
136	Platen Cover Position Sensor 2	Not interrupted	Interrupted
137	Optics Thermistor	Low Temp.	High Temp.
Input No 138 ~ 150 are not used.			
151	Not Used (DJF)	–	–
	One Turn Sensor (RDH)	At HP	Not at HP
152	Original Set SN(DJF)	Original not detected	Original detected
	Pulse Generator Sensor (RDH)	Interrupted	Not interrupted
153	Original Feed SN (DJF)	Original not detected	Original detected
	Original Set Sensor (RDH)	Original not detected	Original detected
154	Not Used (DJF)	–	–
	Recycle Sensor (RDH)	Original not detected	Original detected
155	Lift Switch (DJF)	Down	Sifted
	Original Width Sensor (RDH)	Original not detected	Original detected
156	Feed-out Motor Encoder Pulse (DJF)	–	–
	Registration Sensor (RDH)	Original not detected	Original detected
157	Belt Drive Motor Encoder Pulse (DJF)	–	–
	Inverter Sensor (RDH)	Original not detected	Original detected
158	Feed-in Motor Encoder Pulse (DJF)	–	–
	Feed-out Sensor (RDH)	Original not detected	Original detected
159	Registration SN 2 (DJF)	Original not detected	Original detected
	Not used	–	–
160	Original Width SN 1 (DJF)	Original not detected	Original detected
	Transport Belt Motor Encoder Pulse (RDH)	–	–
161	Original Width SN 2 (DJF)	Original not detected	Original detected
	Feed-in Motor Encoder Pulse (RDH)	–	–
162	Original Width SN 3 (DJF)	Original not detected	Original detected
	Inverter Motor Encoder Pulse (RDH)	–	–

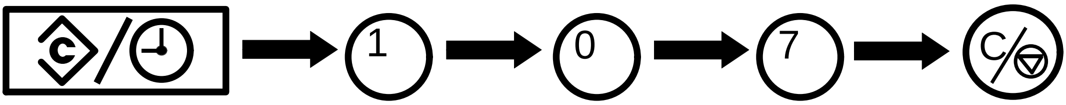
Input No	Sensor/Switch/|Signal	Status	
		0	1
163	Registration SN 1 (DJF)	Original not detected	Original detected
	Feed-out Motor Encoder Pulse (RDH)	–	–
164	Feed-out SN (DJF)	Original not detected	Original detected
	Lift Switch (RDH)	Down	Lifted
165	Not used (DJF)	–	–
	RDH Position Sensor (RDH)	Lifted	Down
166	DF Position SN (DJF)	Open	Closed
	Not used (RDH)	–	–
167	Feed Cover Switch (DJF)	Closed	Open
	Not used (RDH)	–	–
168	Not Used (DJF)	–	–
	Not used (RDH)	–	–
169	Original Length SN (DJF)	Interrupted	Not interrupted
	Not used (RDH)	–	–

2.4 ELECTRICAL COMPONENT CHECK (OUTPUT MODE)

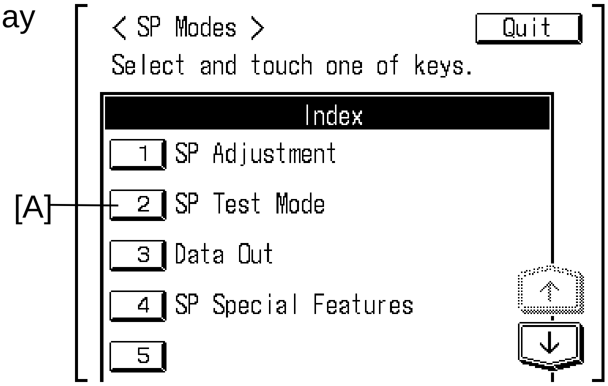
CAUTION: The motors keep turning in this mode regardless of the upper or lower limit sensor signal. Do not keep the electrical component on for a long time to prevent mechanical or electrical damage.

– How to check the sensor/switch/signal –

1. Enter SP mode as follows:
   1) Press the mode clear key.
   2) Enter "107".
   3) Press the clear/stop key for more than 3 seconds.

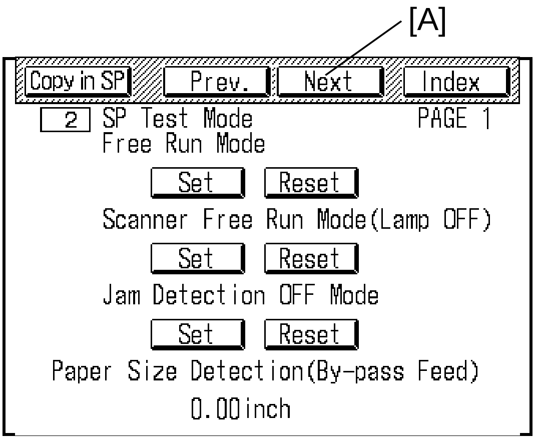


2. Touch 2 [A] on the display to access SP Test mode.


< SP Modes >
Quit
Index
1 SP Adjustment
2 SP Test Mode
3 Data Out
4 SP Special Features
5
[A]

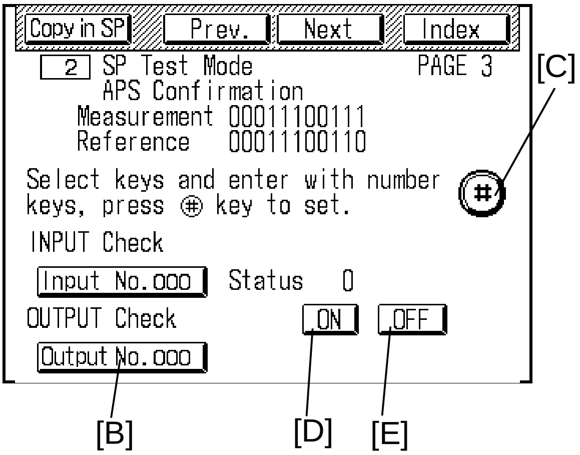
Select and touch one of keys.

3. Touch Next [A] on the display twice.


[A]
Copy in SP
Prev.
Next
Index
Set
Reset
Set
Reset
Set
Reset

2 SP Test Mode PAGE 1
Free Run Mode
Scanner Free Run Mode(Lamp OFF)
Jam Detection OFF Mode
Paper Size Detection(By-pass Feed)
0.00inch

4. 1) Touch Output No. 00 [B].
   2) Enter the electrical component number by using the number keys on the operation panel. (Refer to the table in the following pages.)
   3) Press the Enter key [C].
   4) Press ON [D] to activate and press OFF [E] to de-activate the electrical component.


Copy in SP
Prev.
Next
Index
[C]
#
Input No.000
ON
OFF
Output No.000
[B]
[D]
[E]

2 SP Test Mode PAGE 3
APS Confirmation
Measurement 00011100111
Reference 00011100110
Select keys and enter with number keys, press # key to set.
INPUT Check
Input No.000 Status 0
OUTPUT Check

NOTE: When confirming the activating sound, keep the front door open.

If the front door is closed, when OFF is touched, a mechanical noise caused by home positioning disturbs actual de-activating sound.

Output Check Mode Table – 1

Output No.	Electrical Component
1	Not used
2	Junction Solenoid
3	LCT Feed Clutch
4	By-pass Feed Clutch
5	Duplex Transport Clutch
6	Toner Supply Clutch
7	By-pass Pick-up Solenoid
8	Guide Plate Solenoid
9	LCT Pick-up Solenoid
10	Toner Bottle Motor
11	Duplex Transport Clutch
12	Pressure Arm Solenoid
13	Duplex Positioning Solenoid
14	LCT Down Key LED
15	Not used
16	Main Motor Forward
17	Main Motor Reverse
18	Fusing/Duplex Drive Motor
19	Development Motor
20	Paper Feed Motor - Low Speed
21	Paper Feed Motor - High Speed
22	LCT Motor - Up
23	LCT Motor - Down
24	By-pass Feed Motor - Low
25	By-pass Feed Motor - High (First Copy)
26	Anti-condensation Heater Relay
27	1st Pick-up Solenoid
28	2nd Pick-up Solenoid
29	3rd Pick-up Solenoid
30	Not used
31	1st Pressure Solenoid
32	2nd Pressure Solenoid
33	3rd Pressure Solenoid
34	Not used
35	Toner Collection Motor - High
36	Toner Collection Motor - Low
37	Tandem Lock Solenoid

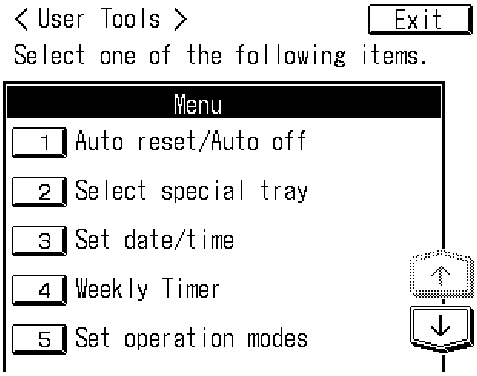
Output No.	Electrical Component
38	1st Lift Motor (Up)
39	1st Lift Motor (Down)
40	2nd Lift Motor (Up)
41	2nd Lift Motor (Down)
42	3rd Lift Motor (Up)
43	3rd Lift Motor (Down)
44	Not used
45	Not used
46	Rear Fence Drive Motor (Counterclockwise)
47	Rear Fence Drive Motor (Clockwise)
48	1st Paper Feed Clutch
49	2nd Paper Feed Clutch
50	3rd Paper Feed Clutch
51	Not used
52	Registration Clutch
53	Main Power Relay
54	Erase Lamp
55	Charge Wire Cleaner Motor
56	Transfer Belt Positioning Solenoid
57	Potential Calibration Mode (–100 V)
58	Potential Calibration Mode (–800 V)
59	QL/PTL
60	Charge Corona/Grid (Copying)
61	Charge Corona/Grid (ID Sensor Pattern)
62	Development Bias (Copying)
63	Development Bias (Non-image Area)
64	Development Bias (ID Sensor Pattern)
65	Transfer Current
66	Exhaust Fan - Low
67	Exhaust Fan - High
Output No68 ~ 100 are not used	
101	Main Motor: Proof mode (A377 S/S) / Not used (Finisher)
102	Main Motor: Sort mode (A377 S/S)
	Transport Drive Motor (Finisher)
103	Exit Motor (A377 S/S) / Not used (Finisher)
104	Turn Gate Solenoid (A377 S/S)
	Exit Drive Motor (Finisher)

Output No.	Electrical Component
105	Bin Drive Motor (A377 S/S)
	Junction Gate Solenoid (Finisher)
106	Jogger Motor (A377 S/S)
	Positioning Roller Solenoid (Finisher)
107	Bin Rear Plate Drive Motor (A377 S/S)
	Jogger Motor (Finisher)
108	Grip Motor (A377 S/S)
	Sift Motor (Finisher)
109	Grip Positioning Solenoid (A377 S/S)
	Stack Feed-out Motor (Finisher)
110	Grip Solenoid
	Shift Tray Lift Motor (Finisher)
111	Staple Unit Drive Motor (A377 S/S)
	Not used (Finisher)
112	Staple Motor (A377 S/S)
	Stapler Drive Motor (Finisher)
113	Not used (A377 S/S)
	Staple Motor (Finisher)
Output No 114 ~130 are not used	
131	Optics Cooling Fan
Output No132 ~ 151 are not used	
152	Not used (DJF) / Original Gate Solenoid (RDH)
153	Not used (DJF) / Inverter Solenoid (RDH)
154	LED "READY" (DJF) / Push Plate Solenoid (RDH)
155	LED "AUTO" (DJF) / Feed-in Clutch (RDH)
156	Not used (DJF) /Feed-in Motor (Clockwise) (RDH)
157	Feed-in motor (DJF) / Feed-in Motor (Counterclockwise) (RDH)
158	Feed-out Motor (DJF) / Feed-in Motor (Clockwise) (RDH)
159	Not used (DJF) / Feed-in Motor (Counterclockwise) (RDH)
160	Belt Drive Motor (DJF) / Transport Belt Motor (Forward) (RDH)
161	Not used (DJF) / Transport Belt Motor (reverse) (RDH)
162	Separation Solenoid - SADF (DJF) / Inverter Motor (RDH)
163	Not used (DJF) / Feed-out Motor (Low) (RDH)
164	Not used (DJF) / Feed-out Motor (High) (RDH)
165	Stopper Solenoid (DJF) / Friction Belt Motor (RDH)
166	Inverter Solenoid (DJF) / Not Used (RDH)
167	Feed-In Clutch (DJF) / LED "READY" ON (RDH)
168	Not Used (DJF) / LED "READY" OFF (RDH)

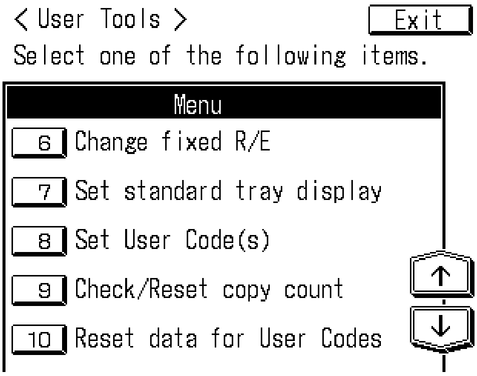
2.5 USER TOOLS

This mode is for the key operators in charge of this copier. The operator can change or set the copier’s default settings using the following user tools.

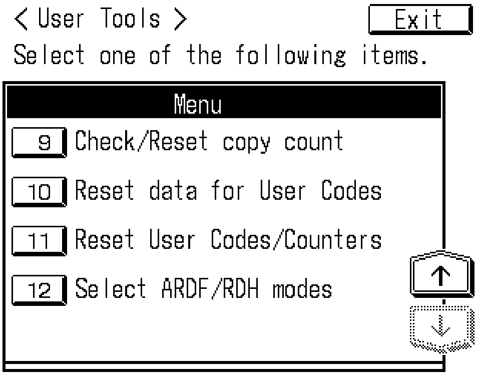
2.5.1 User Tools Menu


< User Tools >
Exit
Menu
1 Auto reset/Auto off
2 Select special tray
3 Set date/time
4 Weekly Timer
5 Set operation modes

Select one of the following items.


< User Tools >
Exit
Menu
6 Change fixed R/E
7 Set standard tray display
8 Set User Code(s)
9 Check/Reset copy count
10 Reset data for User Codes

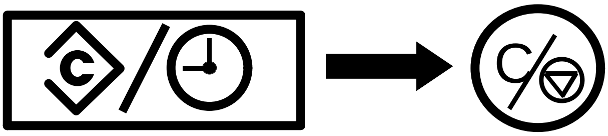
Select one of the following items.


< User Tools >
Exit
Menu
9 Check/Reset copy count
10 Reset data for User Codes
11 Reset User Codes/Counters
12 Select ARDF/RDH modes

Select one of the following items.

2.5.2 How To Access The User Tools

1. Press the Clear Modes key.
2. Press the Clear/Stop key more than 3 seconds until the User Tool Menu appears on the touch panel display.



3. Select the menu number to use by touching the touch panel display.

↑ ↓	This copier has 12 user tools. You can see 5 user tools on the touch panel display at the same time. Use these keys to see the rest of the user tool menu.
Exit	Use to exit the user tool.
Menu	Use to return to the user tool menu display.

1 Auto reset/Auto off

Auto reset	The copier returns to its initial condition automatically after your job is finished. The automatic reset time can be set from 1 second to 999 seconds, or the function can be turned off. **Default:** 60 sec.
Screen Saver	When the machine does not detect anyone operating it for the selected time, the touch panel display turns off automatically. This time can be set from 1 second to 999 seconds, or the function can be turned off. **Default:** 60 sec.
Auto off	When the copier is used after the weekly timer has turned it off, the copier will turn itself back off after the selected time. The auto off time can be set from 1 minute to 999 minutes, or the function can be turned off. **Default:** OFF
SADF Auto reset (for machines with dual job feeder only) (system A or B)	In the SADF mode (Semi-Automatic Document Feed, see page 23), if the next original is not set within the selected time, the machine will cancel the SADF mode automatically. The SADF Auto reset time can be set from 1 second to 60 seconds, or the function can be turned off. **Default:** 5 sec.

2 Select special tray

Tray for Cover Sheet	Select the tray for the Cover function. Paper for cover sheets will be fed from the selected tray. **Default:** No select
Tray Display for Cover Sheet	You can see which tray is set for cover sheets. If you want to see the tray display only in the Cover mode, select "Mode selected". If you want to always see the tray display, select "Full time". **Default:** Full time
Tray for Slip Sheet	Select the tray for the Slip Sheet functions (Paper Designate and OHP Slip Sheet). Paper for slip sheets will be fed from the selected tray. **Default:** No select
Tray Display for Slip Sheet	You can see which tray is set for the slip sheets. If you want to see the tray display only in the Slip Sheet mode, select "Mode selected". If you want to always see the tray display, select "Full time". **Default:** Full time

- The trays set for cover sheets or slip sheets cannot be used for the Auto Paper Select, Auto Tray Switching, and Duplex copying modes.

3 Set date/time

Use to set the copier’s internal clock before setting the weekly timer. Set the clock following the touch panel display instructions.

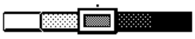
- If necessary, remember to adjust the clock for daylight saving time (summer time), or return it to standard time.

4 Weekly Timer

Use to set the weekly timer. If you set the timer, the copier turns on and off automatically at the selected time each day.

- **Default:** No weekly timer setting
- If you want to turn on the machine for an entire day, input "000" for the ON time and do not input the OFF time.
- If you want to turn off the machine for an entire day (ex.: Saturday, Sunday), do not input the ON time and input "000" for the OFF time.

5 Set operation modes

Maximum copy input number	The maximum copy quantity can be set from 1 to 999. **Default**: 999
Panel beeper	The beeper (key tone) can be set to on or off. ❒ default: ON
Job End Call	The beeper (job end call) sounds when your copying job is finished, supplies (toner, paper) run out, or if a problem occurs in the machine. The Job End Call can be set to on or off Default: ON
Next ↓	↑ Prev.
Image Density Level	Auto and Manual Image Density levels can be adjusted to be lighter or darker. **Default:**  **(center)**
Default Setting	You can select Program No. 5 (see page 42) as a default mode. Use it to store job settings you frequently use. **Default:** Normal
Touch Panel in Waiting Mode	You can select the animation display during the warm-up period and copying run. During the warm-up period, the remaining warm-up time is displayed. During copying, you can see how long it takes to finish copying by entering the number of originals with the Number keys and Enter key. To exit the animation display, touch the Exit key of the touch panel display. **Default:** Reset (no animation display)

6 Change fixed R/E

This copier has 10 fixed ratios (4 enlargements and 6 reductions). You can change these fixed reproduction ratios to different ratios.

7 Set standard tray display

Paper Tray Priority	When Auto Paper Select is canceled, the 1st tray is selected as a default setting. You can cancel this setting and select the other tray as a default setting. **Default:** OFF
Auto Paper Select Priority	As a default setting, the Auto Paper Select is selected. You can cancel this setting. **Default:** Yes
Paper Tray Display in APS mode	In the default setting, the tray display is shown only when the Auto Paper Select mode is canceled. You can cancel this setting and have the tray display shown always. **Default:** No
Auto Tray Switching	If you load paper of the same size and in the same direction in two or more paper trays, the machine automatically shifts to the other tray when the tray in use runs out of paper. **Default:** Yes Bypass feed tray, and trays for cover sheet and slip sheet cannot be used for Auto Tray Switching.

12 Select ARDF/RDH modes

This user tool can be used only when your machine is equipped with the dual job feeder (system A and B) or the recirculating document handler (system C).

Original Count Display	In the default setting, you can see the entered copy quantity on the upper part of the copy counter and the number of copies made on the lower part. You can cancel this setting and see the number of originals to be fed on the lower part of the copy counter. On the upper part, you can see the number of copies made. To cancel the default setting, select "Yes". **Default:** No
Auto Paper Select	In the default setting, the Auto Paper Select is not selected when you set originals in the dual job feeder or recirculating document handler. You can cancel this setting. **Default:** No
Thin Paper mode (for machines with dual job feeder only) (system A or B)	Use when changing the type of originals to be fed. Select this function when you use thin originals (lighter than 53 g/m^2, 14 lb). **Default:** No

☞ Regarding User Tools No. 8, 9, 10, and 11, see the next page.

User Tools for User Code Mode

If the copier is set to use the User Code function, operators must input their user codes before the machine can operate. The copier keeps count of the number of copies made under each user code.

User tools 8, 9, 10 and 11 are for the User Code mode. When you want to use these user tools, you should enter the key operator access code first.

8 Set User Code(s)

Register	Use to register your user code (maximum: 6 digits) ❒ Up to 500 user codes can be registered. ❒ Registered user codes will be sorted in numerical order.
Change	Use to change your present code to a new one. ❒ The number of copies made under the old code is added to that made under the new user code.
Delete	Use to delete your user code. ❒ The number of copies made under the code is deleted.

9 Check/Reset copy count

You can check the number of copies made using each user code. Also, you can clear each code's counter.

10 Reset data for User Codes

Use to reset counter data for all user codes.

11 Reset User Codes/Counters

Use to reset all user codes and counters.

3. TEST POINTS / CHECK POINTS

3.1 MAIN CONTROL BOARD

TP Number	Label	Monitoring Signal
TP101	(PSN)	ID Sensor Output
TP102	(TSN)	TD Sensor Output
TP103	(VLT)	Drum Potential Sensor Output
TP104	(D.TH)	Drum Thermistor Output
TP105	(SIZE)	By-pass Size Signal
TP106	(LAMP)	Exposure Lamp Voltage Monitor Signal
TP107	(FUSER)	Fusing Thermistor Output
TP108	(+5V)	VCC
TP109	(GND)	GND
TP110	(+24V)	VAA
CP101	—	CPU2 → CPU1
CP102	—	CPU1 → CPU2
CP103	—	RXD SS
CP104	—	TXD SS
CP105	—	RXD
CP106	—	TXD
CP107	—	RXD
CP108	—	TXD
CP109	—	RXD
CP110	—	TXD
CP111	—	RXD
CP112	—	TXD
CP113	—	RXD ADF
CP114	—	TXD ADF
CP115	—	Not Used
CP116	—	Not Used
CP117	—	PRT CTS
CP118	—	PRT SOUT

NOTE: TP101 ~ 110 have test pins.

3.2 OPTICS CONTROL BOARD

TP Number	Label	Monitoring Signal
TP501	(ADS)	ADS Sensor Output
TP502	(UNIT-TEMP)	Optics Thermistor Output
TP503	(MOTOR-TEMP)	Scanner Motor Thermistor Output
TP504	(GND)	CGND
TP505	(+5V)	VCC
TP506	(SC-START)	Scanner Start Signal
TP507	(ENCODER-OUT)	Scanner Encoder Signal
TP508	(LP-PWM)	Exp. Lamp PWM
TP509	(HT-PWM)	Fus. Lam PWM
TP510	(SC-PWM)	Scanner PWM
TP511	(SC-DIR)	Scanner DIR
TP512	(FREE-RUN)	Scanner Free Run
TP513	(+24V)	VAA
TP514	(UNIT-ADJ-MODE)	Adjustment Mode
TP515	(ZERO-CROSS)	Zero Cross
TP516	(+38V)	VMM
TP517	(RXD)	RXD
TP518	(THRMST)	Fusing Thermistor Output
TP519	(LAMP)	Exposure Lamp Voltage
TP520	(LE)	Lead Edge
TP521	(TXD)	TXD
TP522	(SUB-IN)	SUB IN

NOTE: TP504, 512, 514 have test pins.

3.3 OPERATION PANEL BOARD

TP Number	Label	Monitoring Signal
TP101	(CPUCK)	CPU Check
TP102	(CLK)	Clock
TP103	(FLM)	Fluorescent Lamp Monitor
TP104	(GND)	GND

4. PREVENTIVE MAINTENANCE SCHEDULE

4.1 PM TABLE

NOTE: The numbers mentioned for PM intervals indicate the number of copies.
Symbol key: C: Clean R: Replace L: Lubricate I: Inspect

	EM	120 K	240 K	360 K	NOTE
OPTICS					
Mirrors, Lens, Reflectors		C	C	C	Cotton pad with water, or blower brush.
Exposure Glass	C	C	C	C	Alcohol or glass cleaner.
Platen Cover Sheet	C	R	R	R	Alcohol or water (replace if necessary).
Scanner Guide Rail		C	C	C	Dry cloth.
ADS, Original Size sensor	C	C	C	C	Blower brush.
Toner Shield Filter	C	C	C	C	Dry cloth, Discharge any static before installation.
Scanner/Lens Guide Rods		L	L	L	Refer to NOTE 1
PAPER FEED (for each paper feed station)					
Paper Feed Rollers (Paper Trays)	C	R	R	R	Water. Replace pick-up, feed, and separation rollers as a set.
Paper Feed Rollers (By-pass/LCT)	C	R	R	R	Water, replace pick-up, feed, and separation rollers as a set.
Paper Feed Guide Plate		C	C	C	Alcohol.
Registration Sensor		C	C	C	Blower brush.
Vertical Transport Rollers		C	C	C	Water
Paper Dust Cleaner		C	C	C	Dry cloth or blower brush
Registration Rollers		C	C	C	Water or alcohol.
Vertical Transport Guide Pin			L		Refer to NOTE 2
AROUND THE DRUM					
Corona Wires	C	R	R	R	Dry cloth or water.
Wire Cleaner			R		
Cleaner Drive Gear			L		Refer to NOTE 3
Charge Grid		R	R	R	
VD, VL, ADS Pattern	C	C	C	C	Dry cloth.
Drum Grounding Terminal		I	I	R	
End Blocks and Casing	C	C	C	C	Water.

Service Tables

	EM	120 K	240 K	360 K	NOTE
Pre-Transfer Lamp Filter	C	C	C	C	Dry cloth and blower brush. Discharge any static before installation.
Quenching Lamp	C	C	C	C	Dry cloth and blower brush.
ID Sensor	C	C	C	C	Blower brush.
Erase Lamp Unit	C	C	C	C	Dry cloth.
Pick-off Pawls	C	C	C	C	Replace if necessary.
Drum Potential Sensor	C	C	C	C	Dry cloth or blower brush.
Cleaning Blade		R	R	R	
Cleaning Seal		C	C	C	Replace if necessary.
Cleaning Brush			R		
Toner Collection Bottle	C	C	C	C	Empty used toner.
Cleaning Drive Section			L		Refer to NOTE 4
DEVELOPMENT UNIT					
Developer		R	R	R	
Upper Seal		C	C	C	
Side Seals		C	C	C	
Air Filter		R	R	R	Vacuum cleaner
Toner Bottle Holder	C	C	C	C	Dry cloth.
Toner Receiver	C	C	C	C	Dry cloth.
Toner Bottle Holder		L	L	L	Refer to NOTE 5
TRANSFER BELT UNIT					
Transfer Belt	C	C	R	C	Dry cloth, clean both sides.
Cleaning Blade		R	R	R	
Belt Drive/Guide/ Bias Rollers		C	C	C	Dry cloth
FUSING/PAPER EXIT UNIT					
Hot Roller		C	R	C	Replace if necessary.
Pressure Roller and Pressure Roller Bearings		C	R	C	Replace if necessary.
Stripper Pawls	C	C	R	C	Replace.
Fusing Entrance and Exit Guides		C	C	C	Suitable solvent.
Fusing Thermistor		C/L	C/L	C/L	Suitable solvent. Refer to NOTE 6
Transport/Exit Rollers			C		Water.

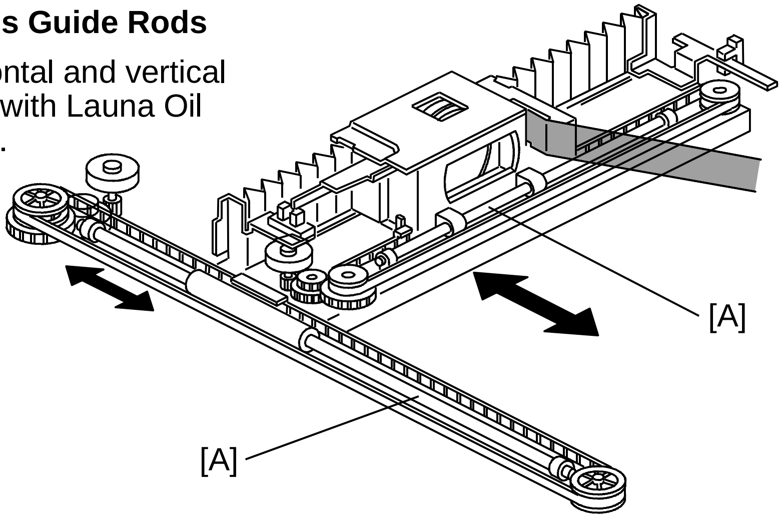
	EM	120 K	240 K	360 K	NOTE
Hot Roller Isolating Bushing			L		Refer to NOTE 6
DUPLEX (for duplex copies)					
Feed Roller		R	R	R	
Separation Belts		R	R	R	
Pick-up/Transport Rollers		C	C	C	
Positioning Pins/Holes		L	L	L	Refer to NOTE 7
OTHERS					
Ozone Filter				R	
Drive Belts		I	I	I	Replace if necessary.
Exit Sensor		C	C	C	Blower brush.
Bushings			L		Spindle oil.
Development Drive Gear				C	
DUAL JOB FEEDER (for originals)					
Transport Belt	C	R	R	R	Belt cleaner. Replace if necessary.
Pick-up Roller	C	C	C	C	Alcohol. Replace if necessary.
Feed Roller	C	R	R	R	Alcohol. Replace if necessary.
Separation Belts	C	R	R	R	Alcohol. Replace if necessary.
SORTER STAPLER (A377)					
Rollers	C	C	C	C	Water.
Bins		C	C	C	Water.
Bushings		L	L	L	Use Launa oil or equivalent.
Gears		L	L	L	Use Grease–501.
SORTER STAPLER (A374)					
Bins		C	C	C	Water.
Rollers		C	C	C	Water.
Bushings		L	L	L	Use Launa oil or equivalent.
Gears		L	L	L	Use Grease–501.

	EM	120 K	240 K	360 K	NOTE
RECIRCULATING DOCUMENT HANDLER					
Transport Belts	C	C	R	C	Belt cleaner. Replace if necessary.
Feed Roller	C	R	R	R	Alcohol. Replace if necessary.
Separation Belt	C	R	R	R	Alcohol. Replace if necessary.
FINISHER					
Rollers		C	C	C	Water.
Bushings		L	L	L	Use Launa oil or equivalent.
Gears		L	L	L	Use Grease–501.

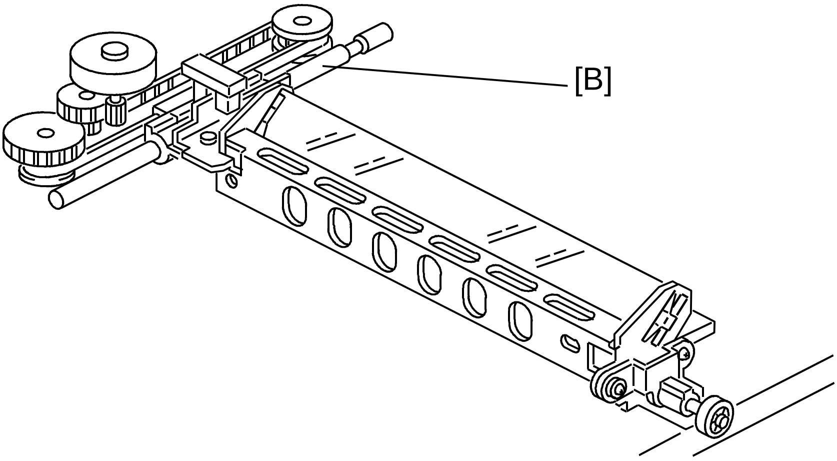
The location of the parts which should be lubricated at PM, are shown in the following figures:

NOTE 1: Scanner/Lens Guide Rods

(1) Lubricate the horizontal and vertical lens guide rods [A] with Launa Oil every 120 K copies.

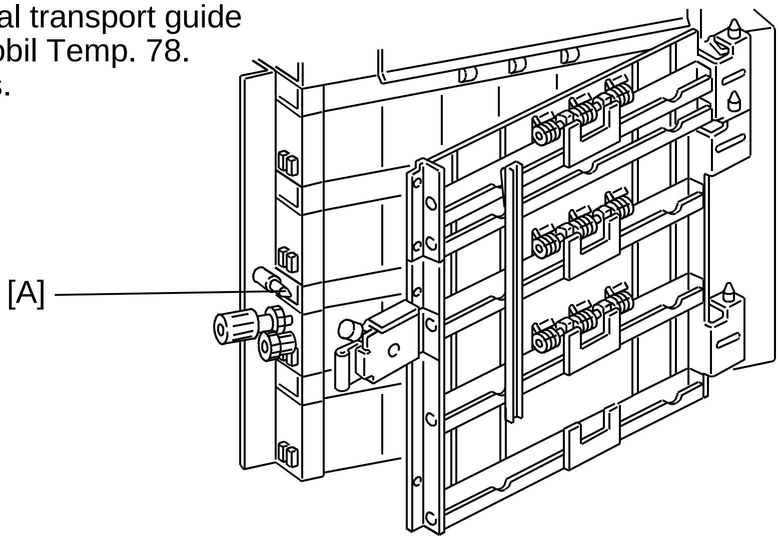


(2) Lubricate the third scanner guide rod [B] with Launa oil every 120 K copies.



NOTE 2: Vertical Transport Guide Lock Pin

(1) Lubricate the vertical transport guide lock pin [A] with Mobil Temp. 78. every 240 K copies.

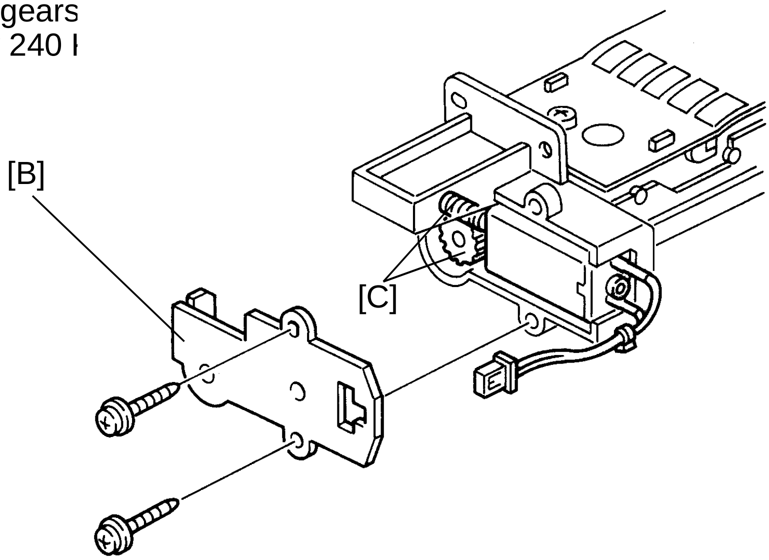


NOTE 3: Charge Wire Cleaner Drive Gears

1. Open the drive motor cover [B] (2 screws).

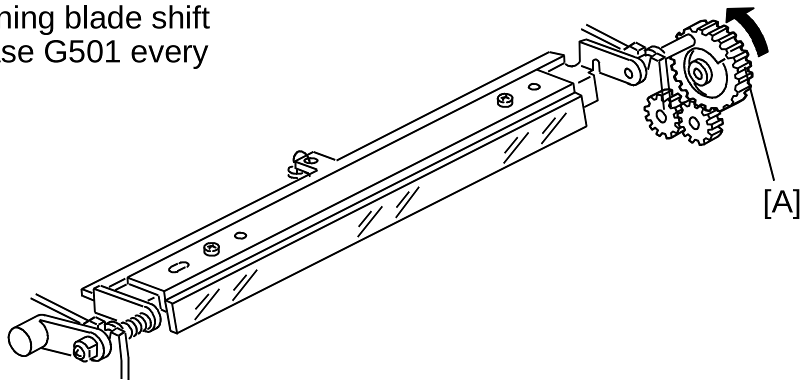
   NOTE: When re-installing the cover, do not tighten the screws too much.

2. Lubricate the charge wire cleaner drive gears
   every 240

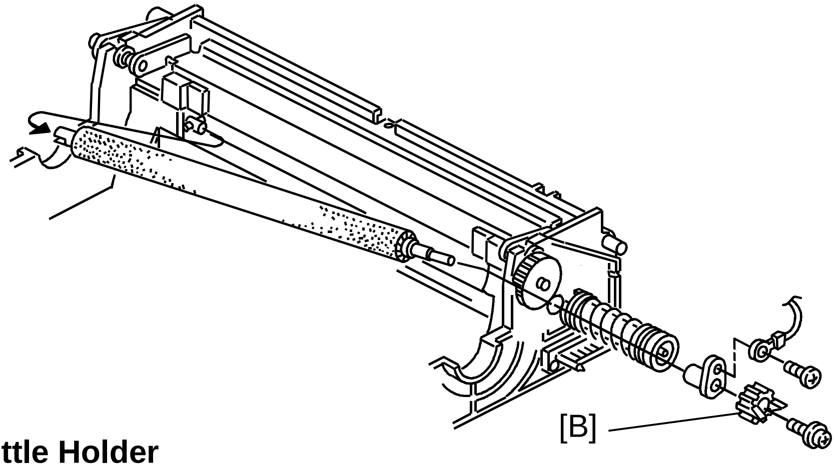


NOTE 4: Cleaning Drive Section

(1) Lubricate the cleaning blade shift cam [A] with Grease G501 every 240 K copies.



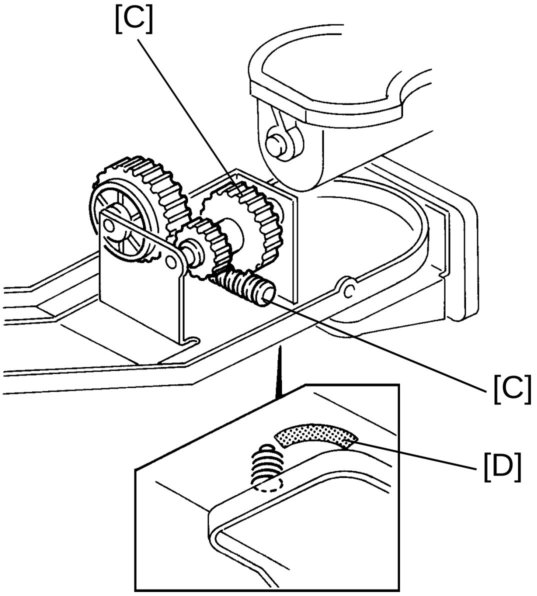
(2) Lubricate the cleaning section drive gear [B] with Grease G501 every 240 K copies.



NOTE 5: Toner Bottle Holder

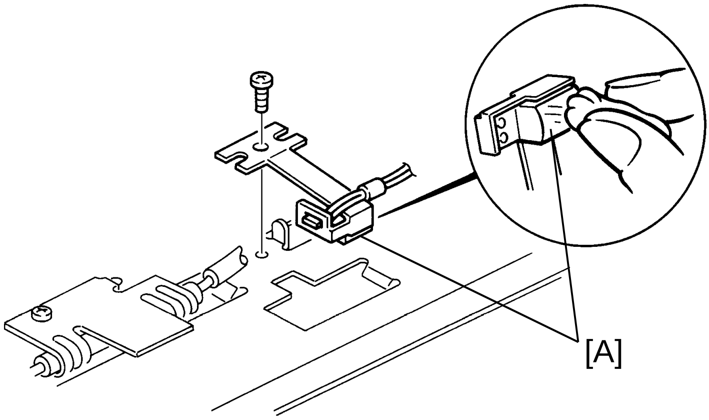
(1) Lubricate the toner bottle drive gears [C] with Grease G501 every 120 K copies.

(2) Lubricate the toner bottle holder [D] with Mobil Temp. 78 every 120 K copies.

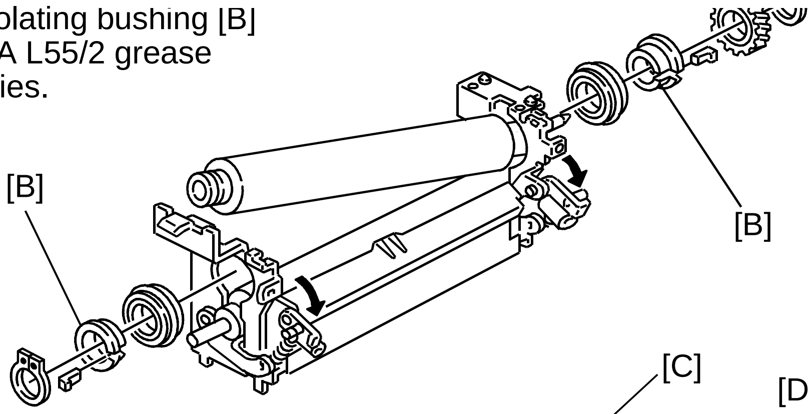


NOTE 6: Fusing Section

(1) Clean the surface of th thermistor [A] where tc hot roller. Then apply s of silicone oil there eve copies.

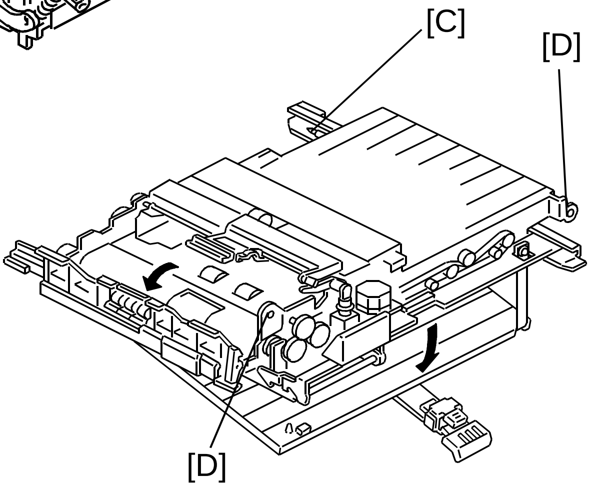


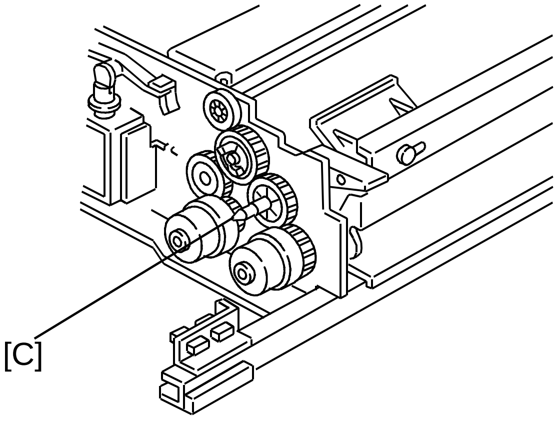
(2) Lubricate the inner anc surface of the isolating bushing [B] with BARRIERTA L55/2 grease every 240 K copies.



NOTE 7: Duplex Unit

(1) Lubricate the two positioning pins [C] and two positioning Holes [D] with Mobil Temp. 78 every 120 K copies.





4.2 EXPLANATION OF REGULAR PM

Item		**Explanation**
Optics Unit	Mirrors, Lens, Reflector, Exposure Glass, Platen Cover, Toner Shield Filter	Stains on any part of the optics unit result in black lines or areas of decreased sharpness on the copy image. Periodic cleaning is required. The exposure glass and the platen cover sheet must also be cleaned. If stains on the platen cover sheet cannot be removed, it must be replaced.
	Exposure Lamp	Deterioration of the exposure lamp affects the copy image. Check the lamp at regular intervals and replace if discolored.
	VD, VL, ADS Patterns	If paper dust or toner accumulates on the VD, VL, ADS Patterns, the image density cannot be controlled correctly. This results in light or dark copies. Clean these patterns at regular intervals.
Transfer Belt Unit	Transfer Belt	A dirty or old transfer belt causes poor image transfer due to its weak chargeability. Clean (both front and rear sides) or replace the transfer belt at regular intervals.
	Belt Drive/ Guide/Bias Rollers	Dirty rollers shift the transfer belt to the front or rear.
	Cleaning Blade	A dirty or worn out cleaning blade will cause toner to adhere on the rear side of the copy. The blade must be replaced at regular intervals.
Paper Feed, Registration	Paper Feed Roller, Pick-up Roller, Separation Roller	This machine uses paper trays, a by-pass feed table, and an LCT for paper feeding. If paper dust adheres to the paper feed rollers or if these rollers are worn out, paper may not feed correctly, or skewing may result. Replacing is required at regular intervals.
	Registration Roller	A dirty registration roller can cause paper to register incorrectly, skew, or jam. Cleaning is required at regular intervals.
	Paper Dust Cleaner	Too much paper dust caught in the cleaner causes paper dust overflow. This results in early deterioration of the cleaning blade, fusing rollers, etc. Clean at regular intervals.
	Registration Sensor	A dirty registration sensor causes paper jams. Clean at regular intervals.

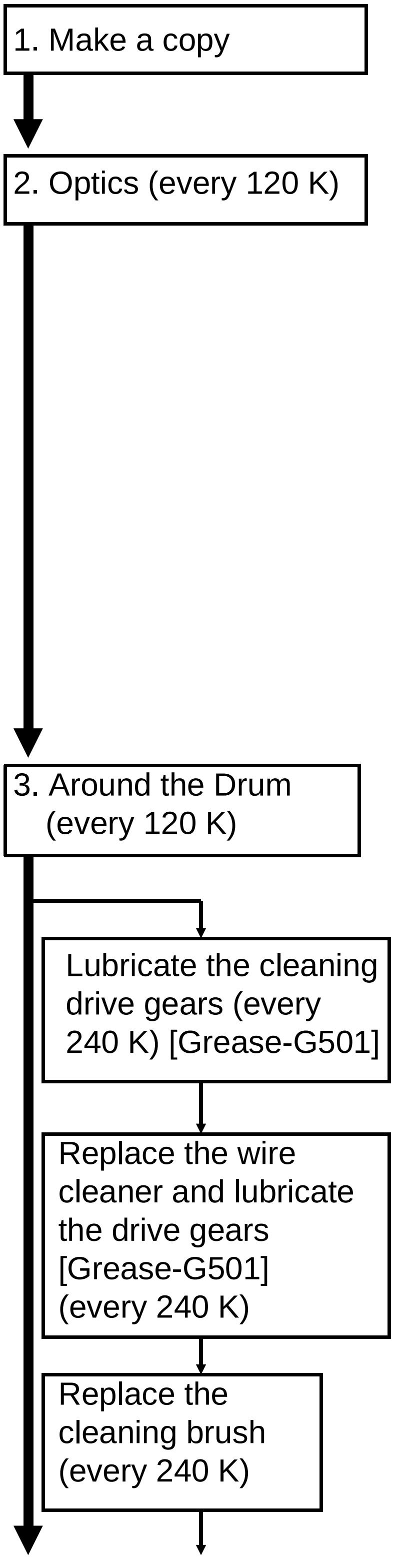
Item		**Explanation**
Around the Drum	Charge Wires/ Wire Cleaner/ Charge Grid	Dirty charge wires may cause uneven image density. They should be replaced at regular intervals.
	End Blocks	Toner tends to accumulate on the corona end blocks, this can result in a high voltage leak. Clean end blocks at regular intervals.
	Drum Grounding Terminal	Too much drum grounding terminal deterioration causes poor drum grounding. This results in dirty backgrounds and drum potential sensor calibration errors.
	QL	If toner accumulates on the QL, a dirty background or a repeating negative image may result. Clean the QL at regular intervals.
	PTL	If paper dust or toner accumulates on the PTL filter, its efficiency may be reduced. This can cause toner to be reattracted to the drum during transfer, reducing image density. Clean the PTL filter at regular intervals.
	ID Sensor	If too much paper dust or toner accumulates on the ID sensor, the toner density cannot be controlled correctly. This results in light copy or over toning. Clean this sensor at regular intervals.
	Erase Lamp	If toner accumulates on the erase lamp, a dirty background may occur in the erased area that becomes progressively worse in long copy runs. Also this affects sensor pattern detection, causing incorrect toner density and exposure lamp control. Clean this lamp at regular intervals.
	Cleaning Blade	A dirty or worn out cleaning blade will cause black lines on copies or scratches on the drum. The blade must be replaced at regular intervals.
	Cleaning Brush	A worn out cleaning brush will not clean the drum surface effectively, resulting in a dirty background and damage to the cleaning blade. Replace at regular intervals.
	Toner Collection Bottle	If the toner collection bottle becomes full, a service call condition occurs and copying is prohibited. Empty the toner collection bottle at regular intervals.
Developme-nt Unit	Developer	The tribo-chargeability of overused developer decreases. This results in toner scattering. Developer must be replaced at regular intervals.

Item		Explanation
Fusing Unit	Thermistor	If toner accumulates on the thermistor, fusing temperature control may not be accurate. Clean the thermistor at regular intervals.
	Stripper Pawls	Toner or dust adhering to the stripper pawls can cause a paper jam. Clean or replace the pawls at regular intervals.
	Fusing Entrance and Exit Guides	Toner piling up on the guide plate will cause a dirty background on the copy or paper jam. Clean the guide plate at regular intervals.
Duplex Unit	Separation/Feed/ Transport Rollers and Separation Belts	If paper dust adheres to the separation/feed/transport rollers and the separation belts, paper may not feed correctly, or skewing may result. Replacement is required at regular intervals.
Others	Ozone Filter	When an ozone filter deteriorates, ozone produced in the copier will not be absorbed, causing headaches, irritations, or other discomforts. Replace at regular intervals.
DJF	Transport Belt	A dirty transport belt can leave stains on copies. Replace the belt at regular intervals.
	Pick-up Roller, Feed Roller, Separation Belt	When dirty, these rollers and this belt can leave stains on the copy paper. Also, original misfeeds or multi-feeds may occur. Replace these parts at regular intervals.
RDH	Transport Belt	A dirty transport belt can leave stains on copies. Clean or replace the belt at regular intervals.
	Feed Roller Separation Belts	When dirty, these rollers and these belts can leave stains on the copier. Also, original misfeeds or multi-feeds may occur. Replace these parts at regular intervals.

4.3 REGULAR PM PROCEDURE

➡ Every 120k

→ Every 240k or 360k


1. Make a copy
2. Optics (every 120 K)
3. Around the Drum (every 120 K)
Lubricate the cleaning drive gears (every 240 K) [Grease-G501]
Replace the wire cleaner and lubricate the drive gears [Grease-G501] (every 240 K)
Replace the cleaning brush (every 240 K)

Make a copy of O-S-A3 test chart at manual image density level 4.

2-1. Clean the mirrors, lens and reflectors by using a soft cloth, cotton pad with water, or a blower brush.

2-2. Clean the exposure glass with alcohol or water.

2-3. Clean the scanner guide rail with a dry cloth.

2-4. Clean the magnification guide rail with a dry cloth.

2-5. Clean the ADS sensor and the original width and length sensors with a blower brush.

2-6. Inspect the exposure lamp, if necessary, replace it.

2-7. Lubricate the lens and 3rd scanner drive guide rods. [Launa oil]

3-1. Remove and open the drum unit and clean the ID and Drum Potential sensors with a blower brush.

3-2. Clean the pick-off pawls and the toner shield filter. Discharge any static electricity on the filter.

3-3. Clean the QL and PTL filter, and erase lamp with a dry cloth, discharge any static before installation.

3-4. Clean the end blocks and casing with water or alcohol.

3-5. Replace the grid plate and corona wire.

3-6. Clean the registration rollers and paper dust cleaner.

3-7. Empty the toner collection bottle.

3-8. Clean the inside of the cleaning section, cleaning brush, and seals.

3-9. Replace the cleaning blade.

4. Development unit (every 120 K)

4-1. Remove the developer.

4-2. Clean the development unit and gears.

4-3. Pour a pack of new developer.

4-4. Replace the air filter.

4-5. Clean the toner bottle holder and toner receiver.

4-6. Lubricate the bottle drive mechanism. [Grease G-501]

5. Paper feed (every 120K for each Feed Station)

5-1. Clean the paper guide plates and vertical transport/relay rollers.

5-2. Replace the paper feed, pick-up, and separation rollers.

Note:
The feed (pick-up, feed, separation) rollers for the 1st ~ 3rd feed trays are different from the feed rollers for the by-pass feed table and 3.5 K LCT.
There is no interchangeability.

5-3. Clean the registration sensor.

5-4. Lubricate the transport guide lock pin.

6. Transfer belt unit (every 120 K)

6-1. Clean the transfer belt.

6-2. Replace the transfer unit cleaning blade.

6-3. Clean the belt drive/guide rollers and bias Surlier.

Replace the transfer belt (every 240 K)

7. Duplex unit (every 120 K)

7-1. Replace the separation roller and separation belts.

7-2. Clean the feed and transport rollers.

7-3. Lubricate the duplex positioning pins.

8. Fusing unit
(every 120 K)

8-1. Clean the entrance and exit guide plates.

8-2. Clean the thermistor and apply silicone oil.

8-3. Clean the stripper pawls.

Replace stripper pawls, hot roller, pressure roller, and pressure roller bearings. Lubricate the isolating busing. (every 240 K)

9. Exit unit
(every 80 K)

9-1. Clean the exit rollers.
9-2. Inspect the antistatic brush.
9-3. Clean the exit sensor.

Replace the ozone filter (every 360 K)

10. Rear side
(every 80 K)

10-1. Lubricate the gears.

10-2. Inspect the timing belts.

Replace the drum grounding plate (every 360 K)

11. Exterior
(every 80 K)

11-1. Clean the covers.

12. Copy Quality

12-1. Perform the developer initial setting. (1 SP Adjustment – PAGE 1).

12-2. Perform the process control data initial setting. (1 SP Adjustment – PAGE 1).

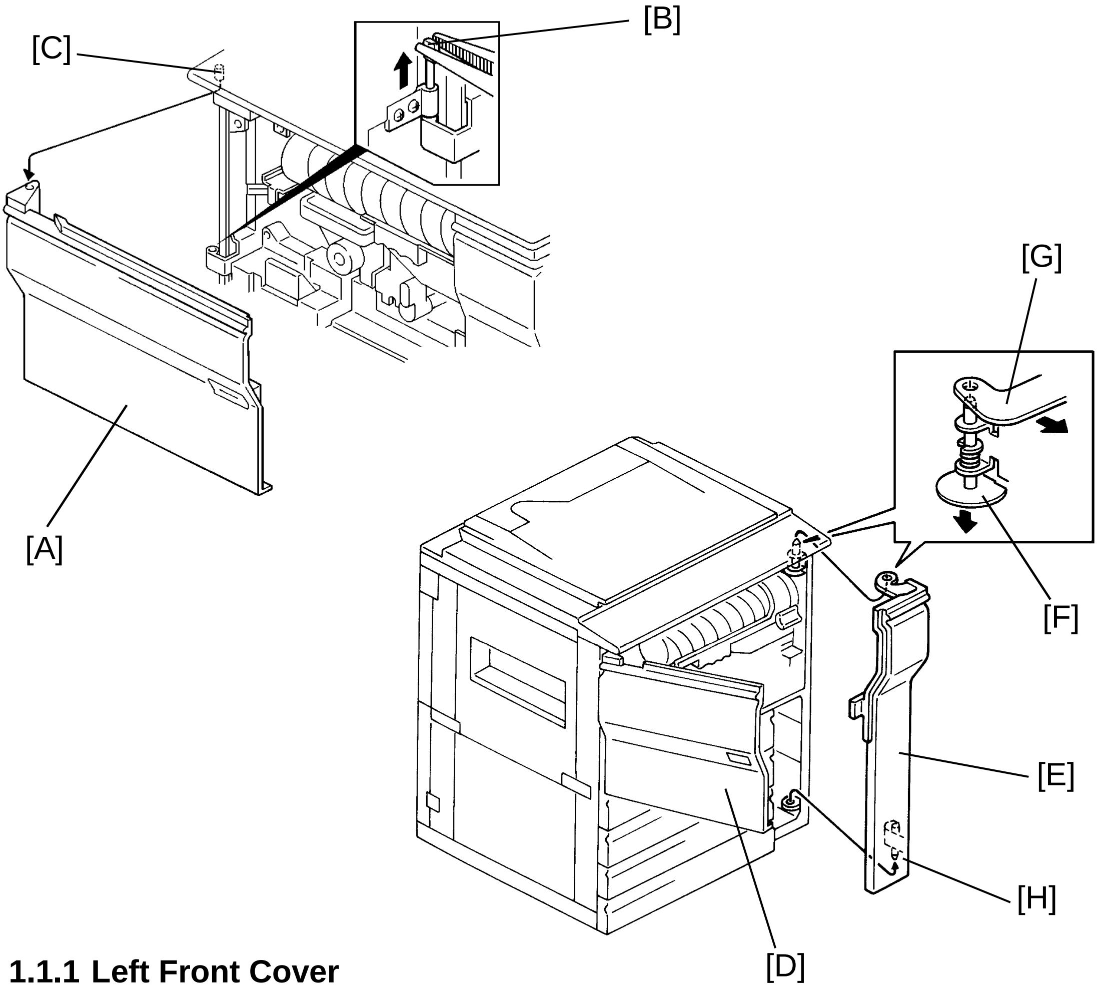
CAUTION: Perform the developer initial setting only when the new developer is installed.
Never make any copies before the developer initial setting.

SECTION 5

REPLACEMENTS AND ADJUSTMENTS

1. EXTERIOR AND INNER COVER REMOVAL

1.1 FRONT SIDE



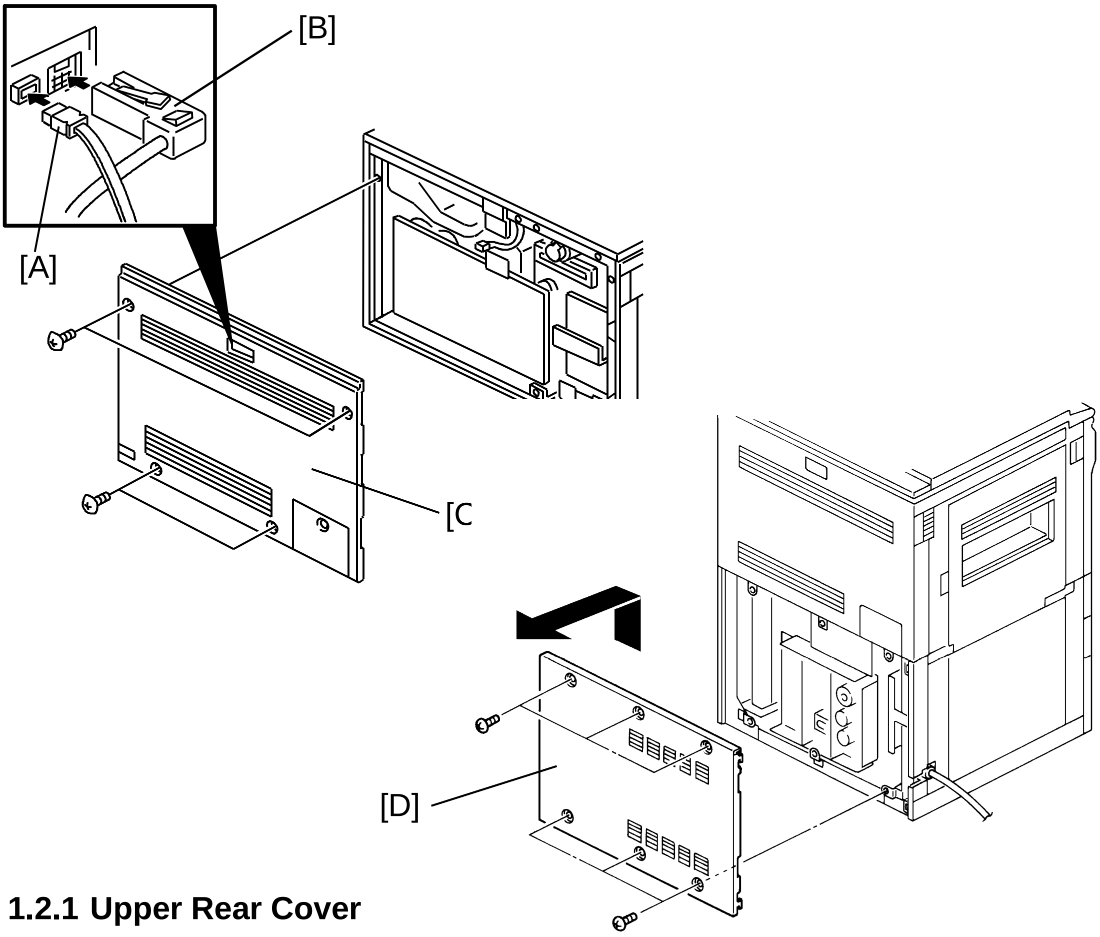
1.1.1 Left Front Cover

1. Open the left front door [A] then unhook the chain (1 screw).
2. Pull out the pin [B].
3. Unhook the upper pin [C].

1.1.2 Right Front Door

1. Open the left front door [D].
2. Open the right front door [E].
3. Lower the pin [F] to unhook the upper hinge bracket [G].
4. Unhook the lower pin [H].

1.2 REAR SIDE



1.2.1 Upper Rear Cover

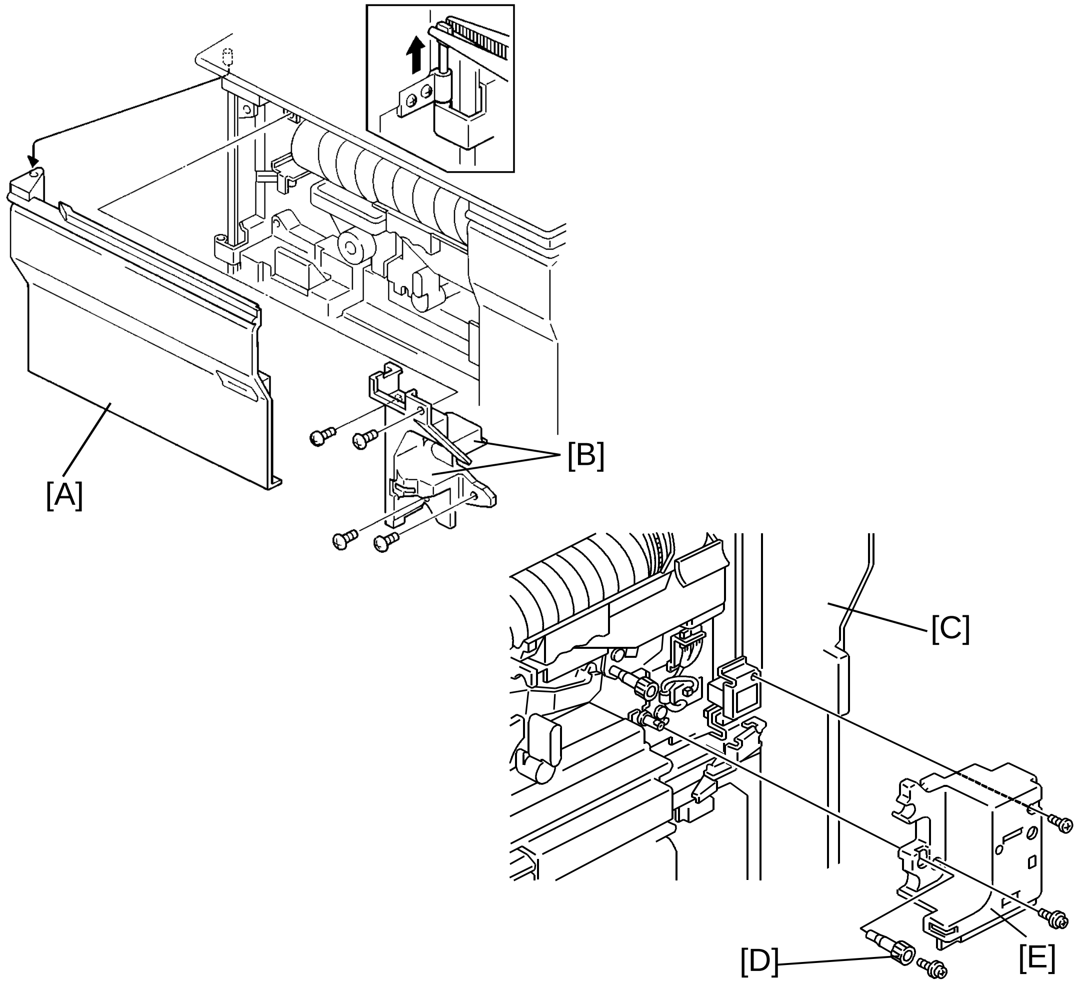
1. Turn off the main switch.
2. If the DJF or RDH is installed, disconnect the fiber optics connectors [A] and [B].

   NOTE: After the upper rear cover is re-installed, set the fiber optics connectors [A] and [B] so that the fiber optic cable [A] is located over the electrical cable [B]. Also, the fiber optic cable [A] should not bend while opening and closing the DJF or RDH.
3. Remove the upper rear cover [C]. (4 screws)

1.2.2 Lower Rear Cover

1. Remove the lower rear cover [D]. (6 screws)

   NOTE: When installing the lower rear cover, set the hooks in the holes on the right and left side covers.



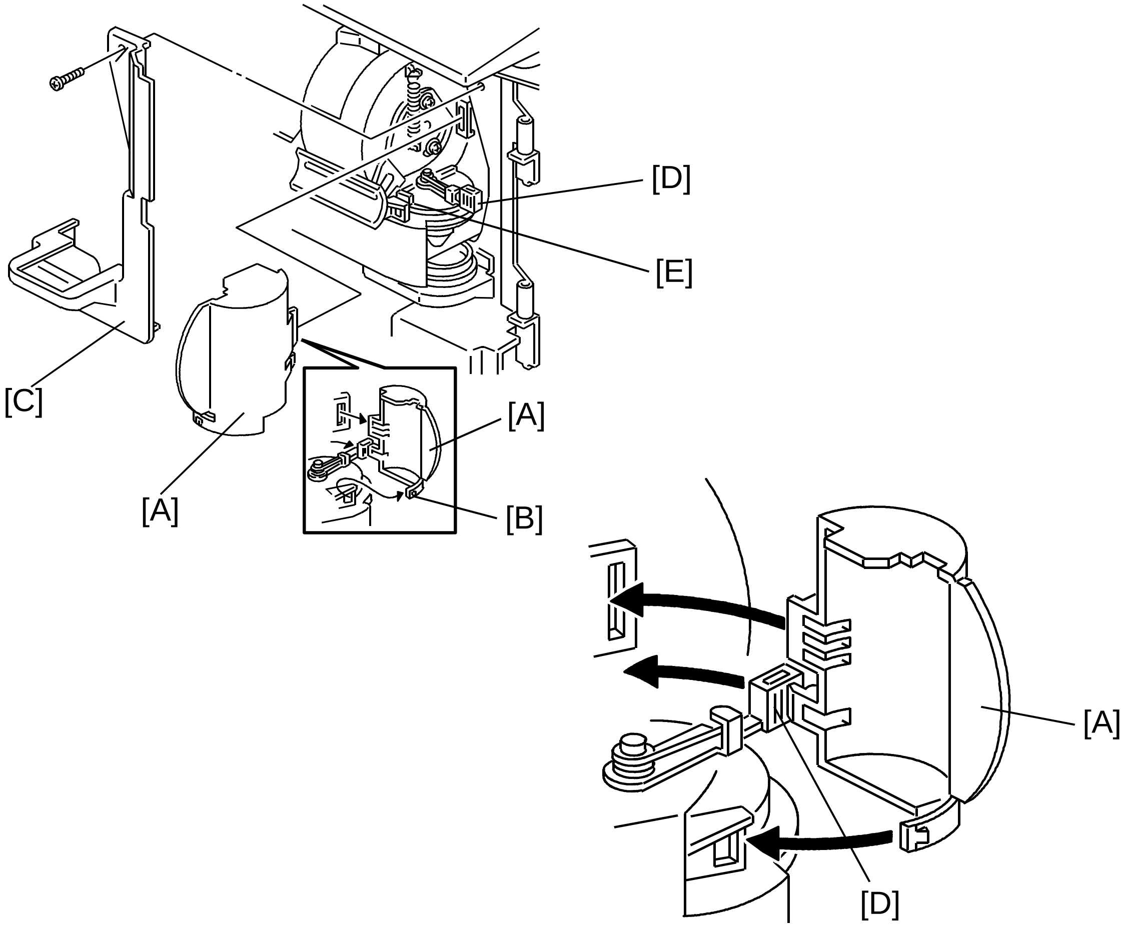
1.2.3 Left Inner Cover

1. Remove the left front door [A].
2. Remove the left inner cover (4 screws) [B].

1.2.4 Right Inner Cover

1. Open the right door [C].
2. Remove knob (B1) [D] (1 screw).
3. Remove the right inner cover [E] (2 screws).

1.2.5 Shutter Inner Cover

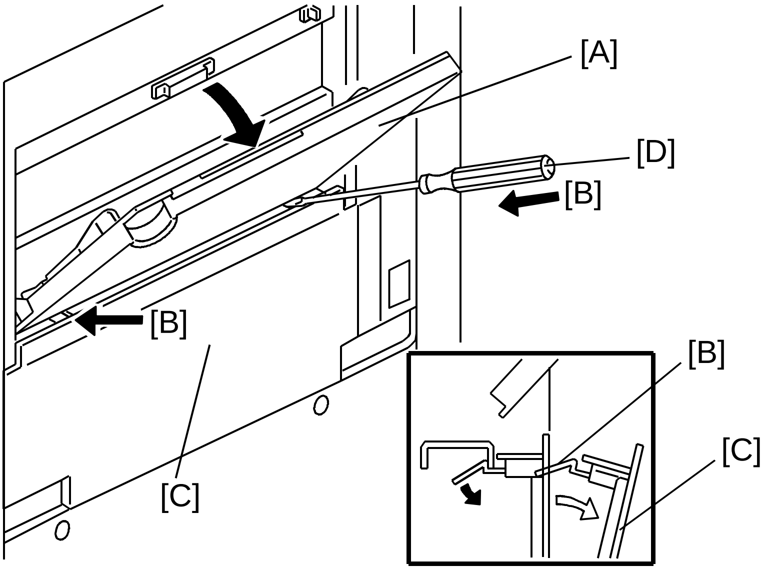


1. Open the right door.
2. Remove the shutter cover [A] by releasing the hook [B].
3. Remove the shutter inner cover [C] (1 screw).

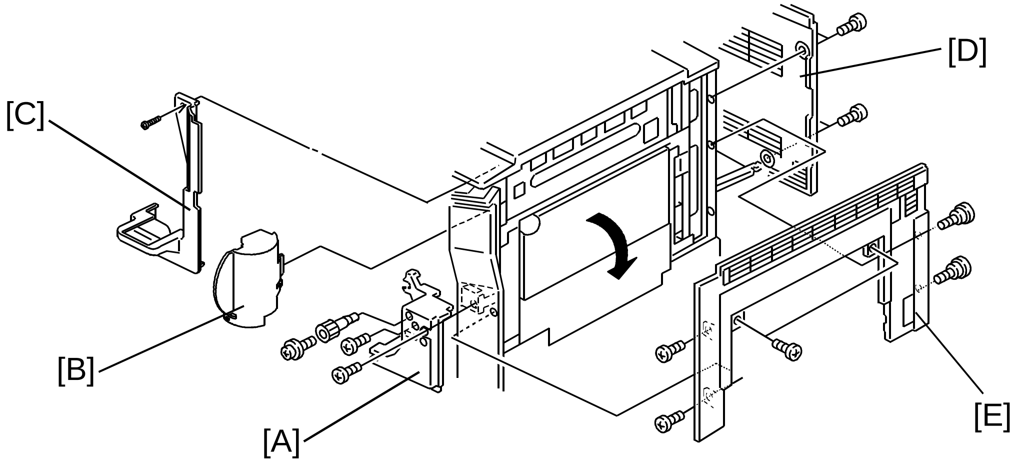
NOTE: 1. Be sure to move the lever [D] until it contact the part [E].
2. While installing the shutter cover [A], the lever [D] must be pushed as shown.

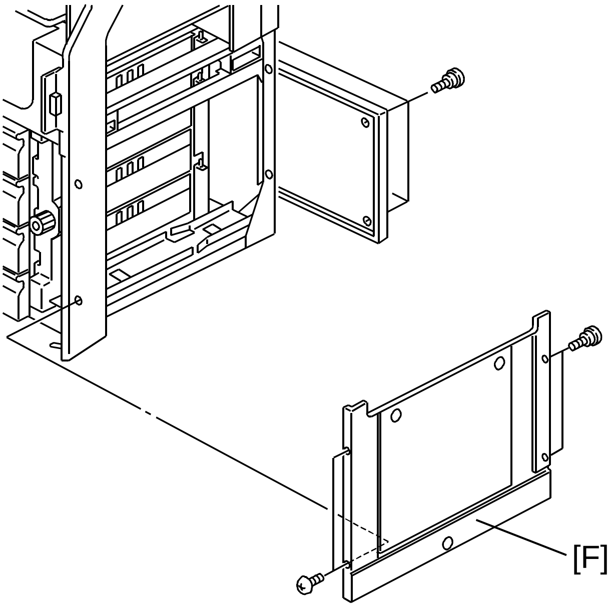
1.3 RIGHT SIDE

1.3.1 Feed Unit Cover



1. Open the by-pass table [A] approximately 45 degrees and push the stoppers [B] of the feed unit cover [C] by using a small flat head screw driver [D], then remove the feed unit cover.





1.3.2 Upper Right Cover

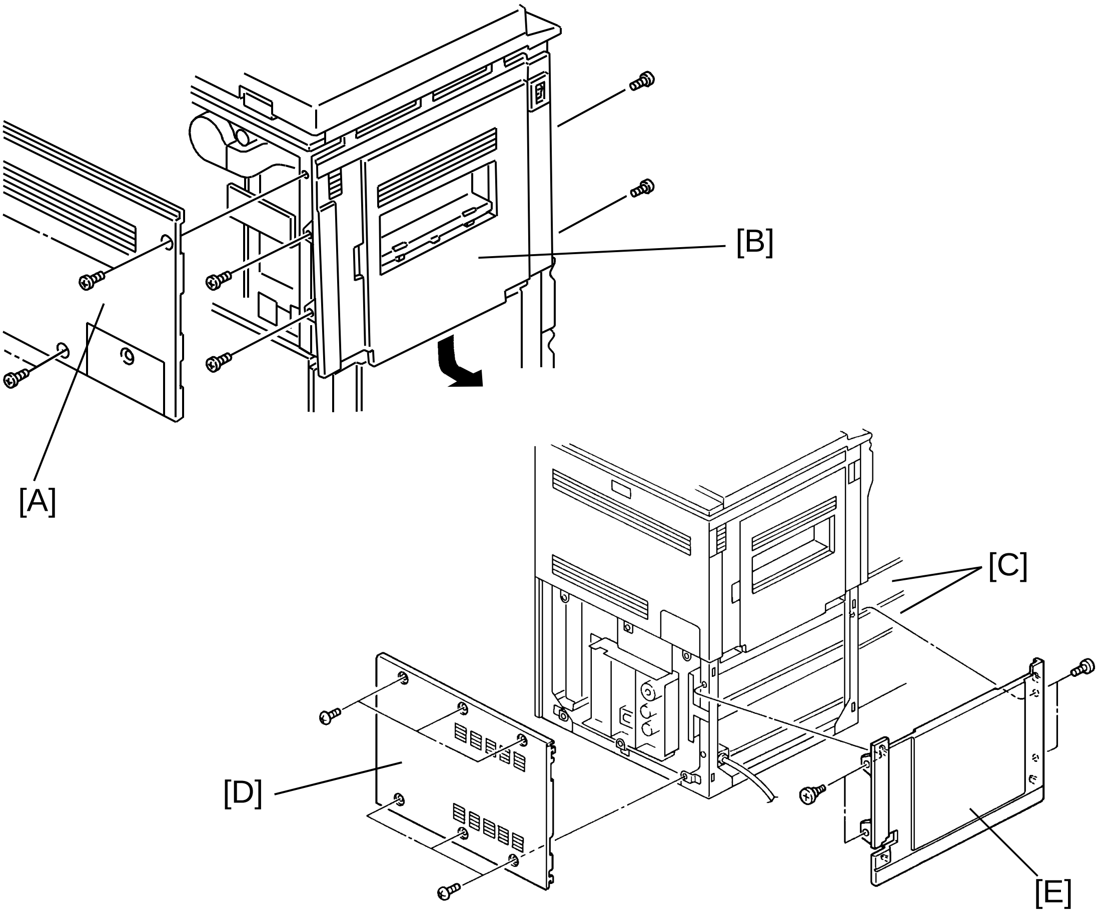
1. Remove the right inner cover [A], shutter cover [B] and the shutter inner cover [C]. (Refer to Shutter Inner Cover Removal.)
2. Remove the upper rear cover [D]. (Refer to Upper Rear Cover Removal.)
3. Open the manual feed table and remove the upper right cover [E] (6 screws).

1.3.3 Lower Right Cover

1. Remove the lower rear cover. (Refer to Lower Rear Cover Removal.)
2. Open the right door.

   NOTE: When installing the lower right cover, set the hooks in the holes on the right and left side covers.
3. Remove the lower right cover [F] (4 screws).

1.4 LEFT SIDE



1.4.1 Upper Left Cover

1. Remove the left inner cover. (Refer to Left Inner Cover Removal.)
2. Remove the upper rear cover [A]. (Refer to Upper Rear Cover Removal.)
3. Remove the upper left cover [B] (4 screws).

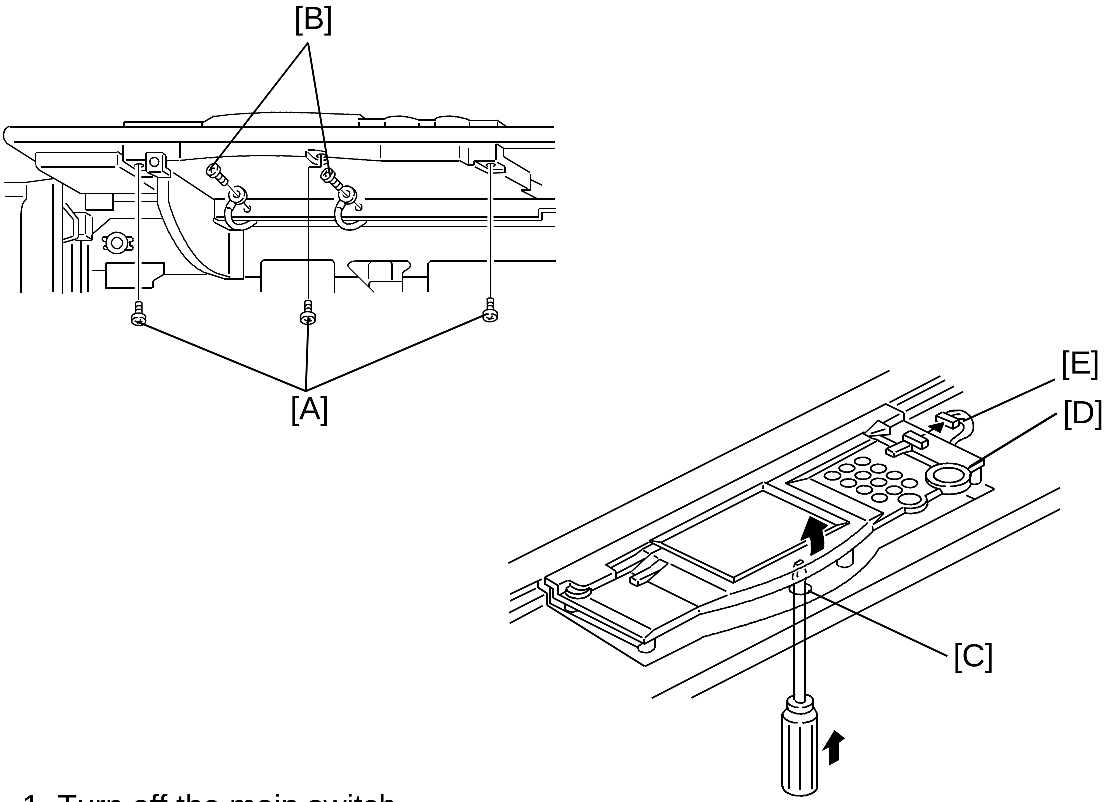
NOTE: When installing the upper left cover, set the hooks in the holes on the right and left side covers.

1.4.2 Lower Left Cover

1. Pull out the second and the third feed trays [C].
2. Remove the lower rear cover [D].
3. Remove the lower left cover [E] (4 screws).

NOTE: When installing the lower left cover, set the hooks in the holes on the right and left side covers.

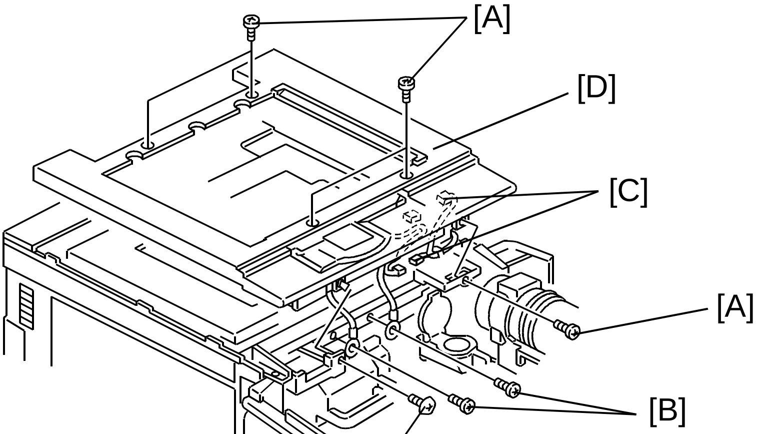
1.5 OPERATION PANEL

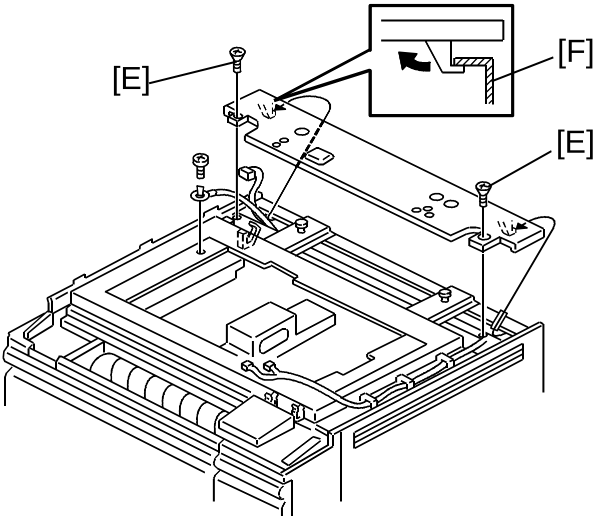


1. Turn off the main switch.
2. Remove the left door. (Refer to Left Door Removal.)
3. Remove the left inner cover. (Refer to Left Inner Cover Removal.)
4. Open the right door.
5. Open the toner bottle.
6. Remove three screws [A].
7. Remove two screws [B] securing the protective earth wires.
8. Insert the screw driver through the hole [C] and push the operation panel [D] up.
9. Disconnect the connector [E].

   NOTE: Be sure not to damage the harness by pulling the connector too strongly.

1.6 UPPER SIDE





1.6.1 Upper Cover

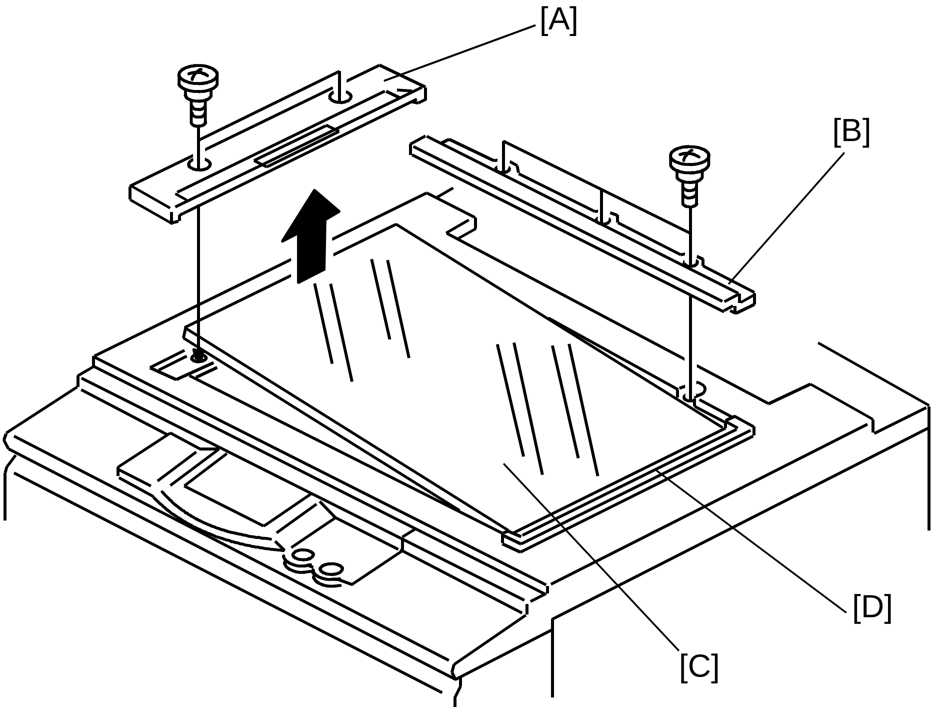
1. Turn off the main switch.
2. Remove six screws [A].
3. Remove two screws [B] securing the grounding wires.
4. Disconnect two connectors [C].
5. Remove the upper cover [D].

1.6.2 Rear Upper Cover

1. Turn off the main switch.
2. Remove the platen cover or document feeder (DJF or RDH) from the copier.
3. Remove the upper cover.
4. Remove the 2 screws securing the rear upper cover [E].
5. Disengage the hooks [F] by sliding the rear upper cover to the front and remove it.

2. OPTICS

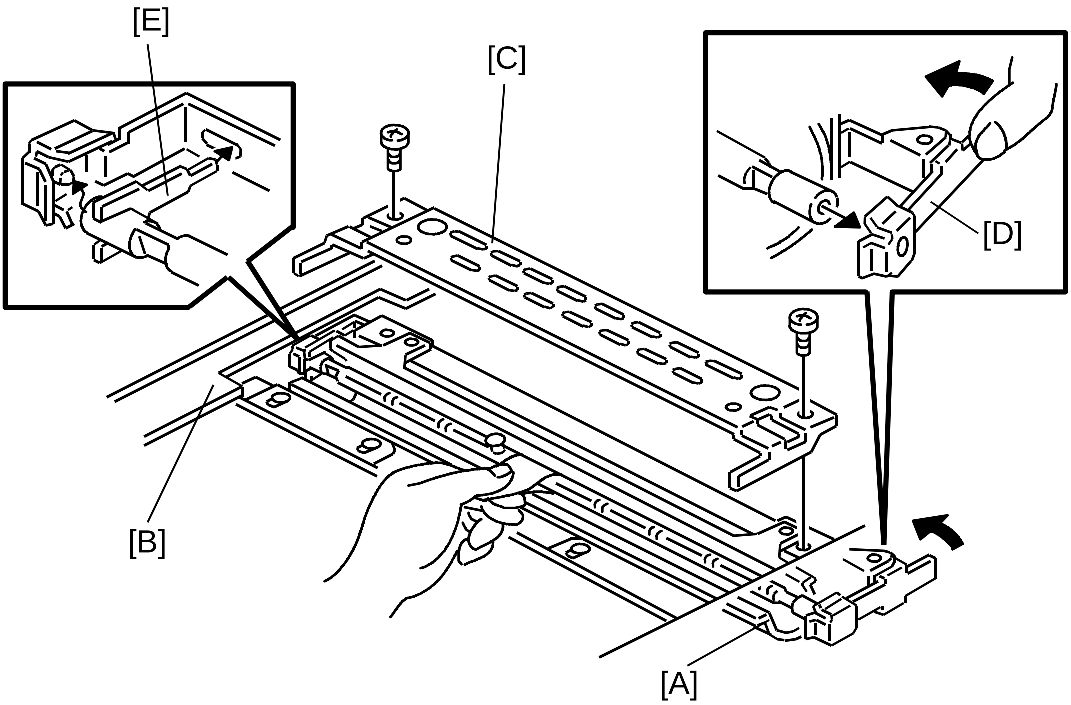
2.1 EXPOSURE GLASS REMOVAL



1. Turn off the main switch.
2. Remove the left scale [A] (2 shoulder screws).
3. Remove the rear scale [B] (3 screws).
4. Grasp the left edge of the exposure glass [C] and lift slightly. Slide the other edge out from under the right glass holder [D]. Remove the exposure glass.

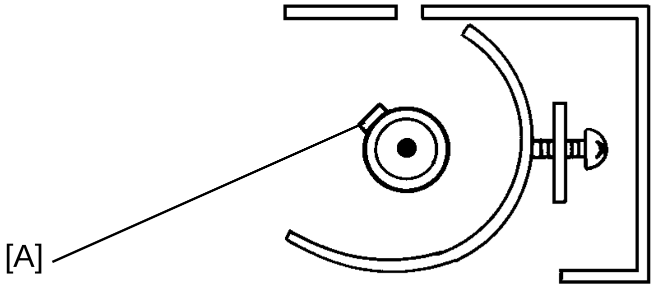
   NOTE: When reinstalling the exposure glass, make sure that the mark (white: A095 copier/red: A096 copier) on the edge of the glass is located at the rear right corner. This side is smoother and it generates less static electricity when the RDH is used.

2.2 EXPOSURE LAMP REPLACEMENT



NOTE: Do not touch the reflector or the new exposure lamp with your bare hands. Use a strip of paper as shown. (Oil marks from fingers on the lamp or reflectors will be affected by heat from the lamp.)

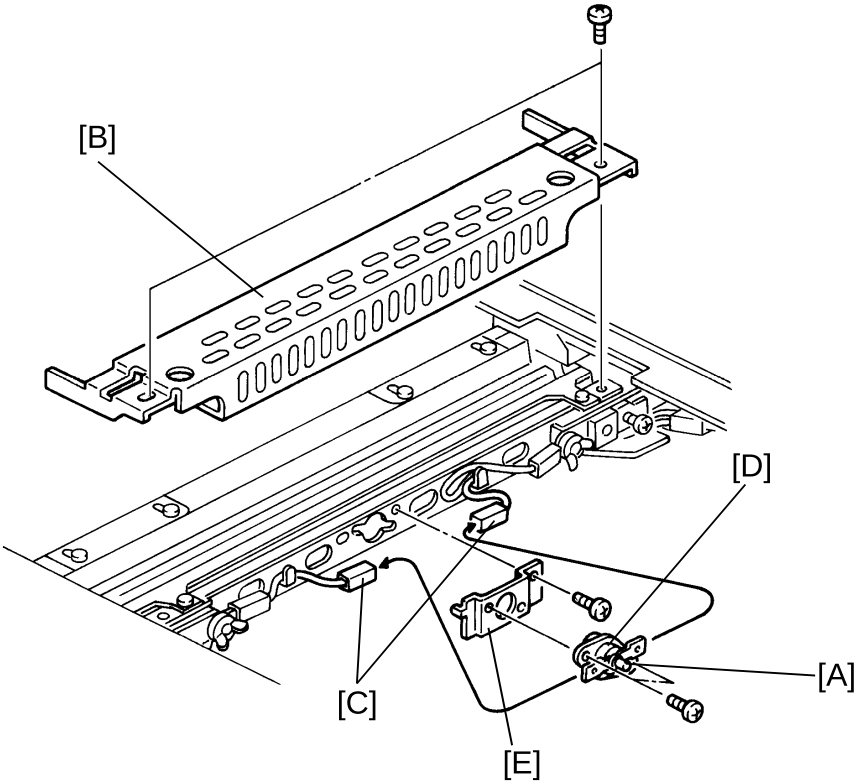
1. Remove the exposure glass. (Refer to Exposure Glass Removal.)
2. Move the first scanner [A] to the cutout position at the rear frame [B]. (See illustration.)
3. Remove the reflector cover [C] (2 screws).
4. While holding the lamp with the paper strip, release the lamp terminal [D] as shown; then, take out the lamp.
5. Install a new lamp. Use a strip of paper as shown to hold the lamp. Confirm that the lamp is properly set by both terminals and that the clip [E] is set properly.



NOTE: Make sure that the blister [A] on the lamp points towards the reflector opening (left side of the copier) as shown.

6. Reassemble the copier.
7. Turn on the main switch and enter SP mode, then perform the process control data initial setting (1 SP Adjustment – PAGE 1).

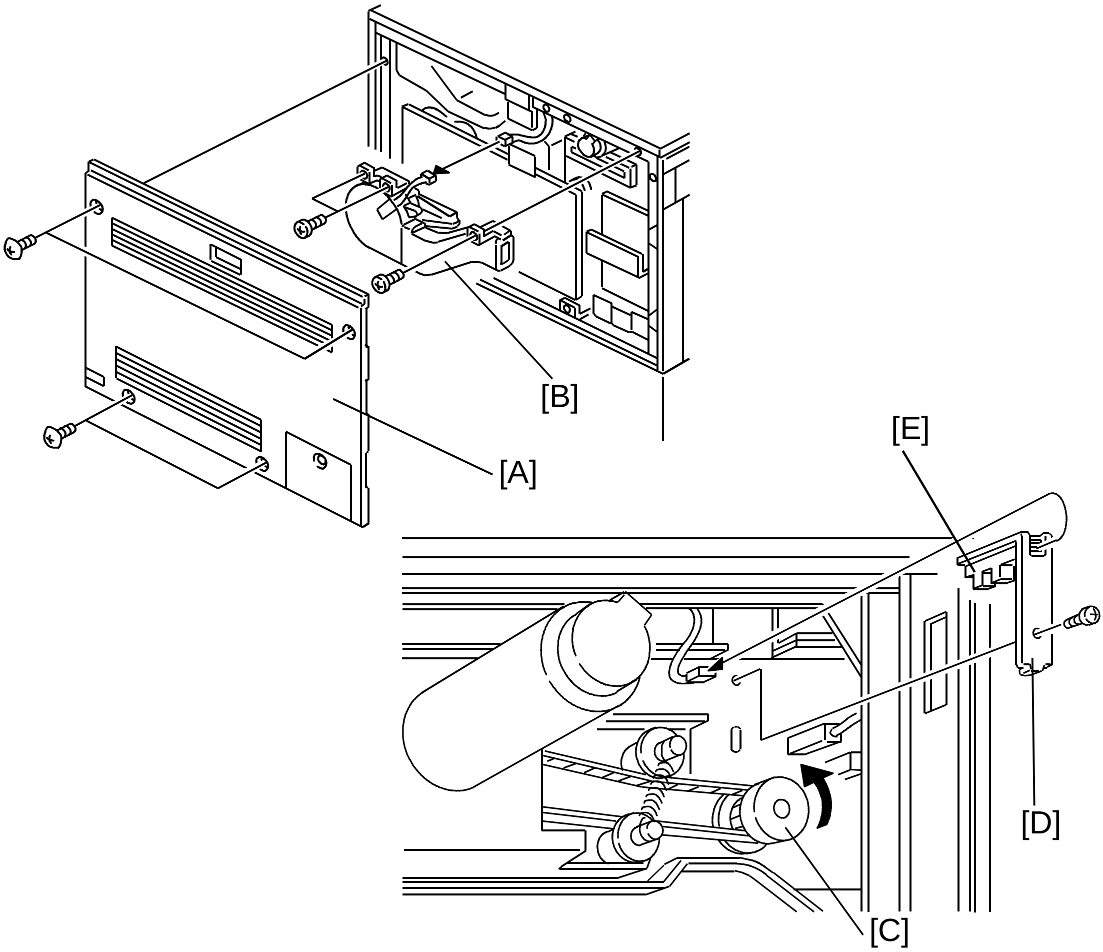
2.3 OPTICS THERMOSWITCH REPLACEMENT



NOTE: The thermoswitch can be reset manually by pushing the red button [A] when the exposure lamp area cools.

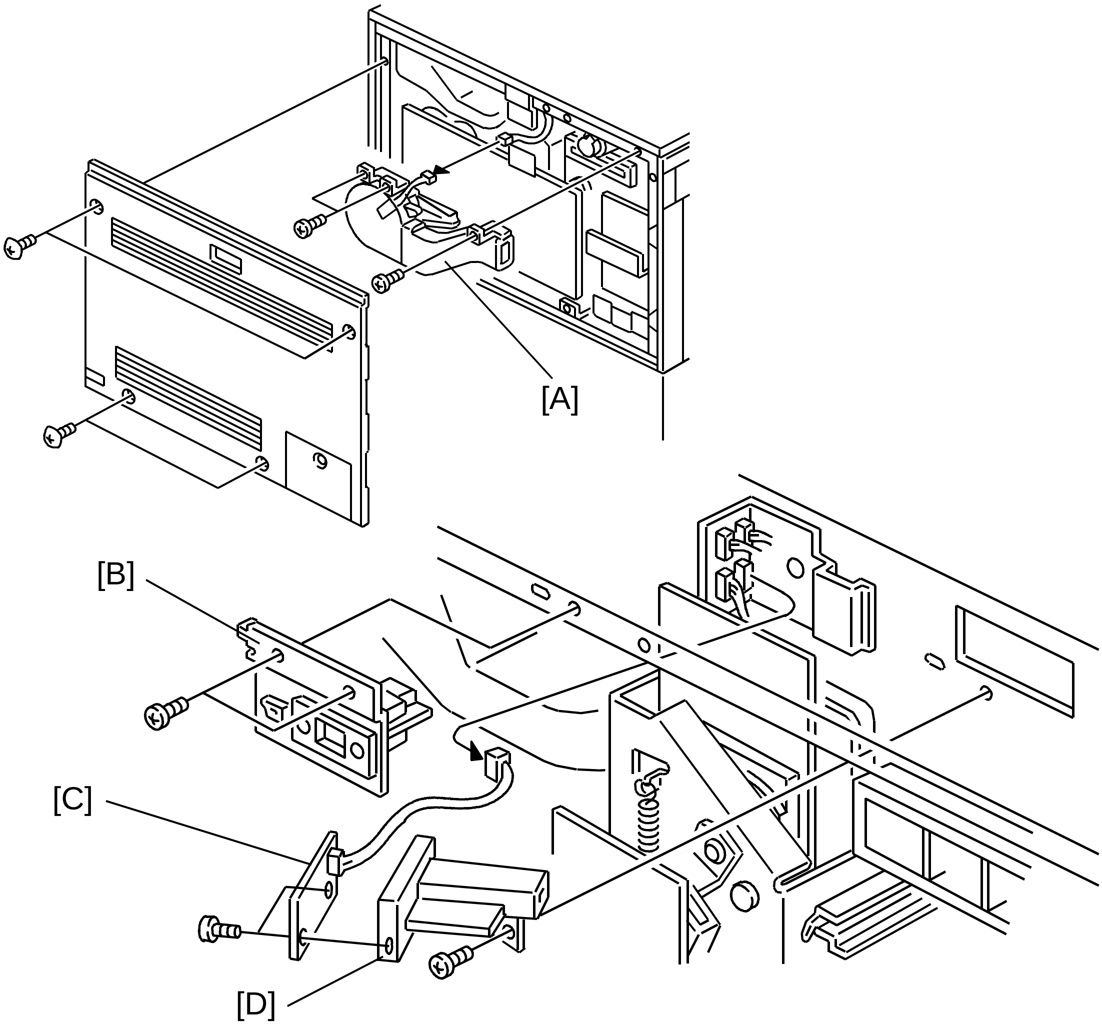
1. Remove the exposure glass. (Refer to Exposure Glass Removal.)
2. Move the first scanner to the cutout position at the rear frame.
3. Remove the reflector cover [B] (2 screws).
4. Remove the exposure lamp leads [C] from the terminals on both sides of the thermoswitch [D].
5. Remove the thermoswitch bracket [E] (1 screw).
6. Remove the thermoswitch from the bracket (2 screws), and replace it.

2.4 SCANNER HP SENSOR REPLACEMENT



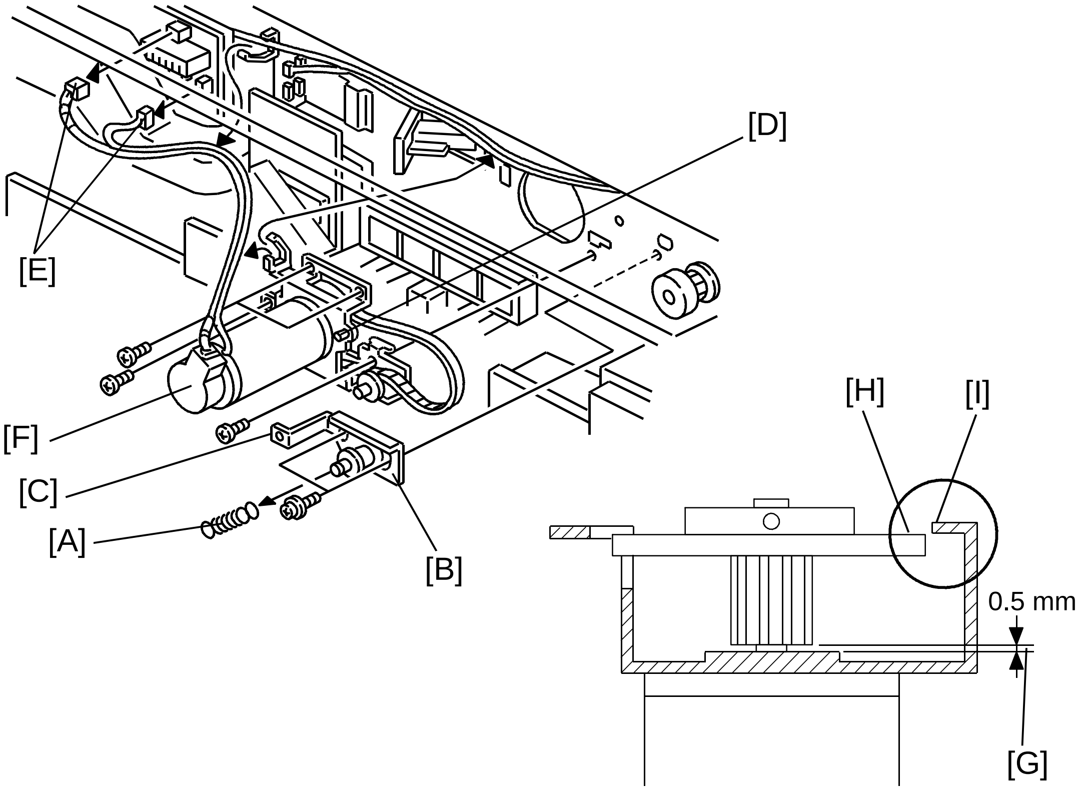
1. Remove the upper rear cover [A]. (Refer to Upper Rear Cover Removal.)
2. Remove the exhaust fan [B] (3 screws).
3. Manually turn the scanner drive pulley [C] counterclockwise to move the scanners about 10mm to the left (rear view).
4. Remove the scanner HP sensor bracket [D] (1 screw).
5. Disconnect the connector.
6. Replace the scanner HP sensor [E] (1 screw).

2.5 ADS SENSOR REMOVAL



1. Remove the exhaust fan [A]. (Refer to Scanner HP Sensor Replacement.)
2. Remove the DJF/RDH connector bracket [B] (2screws).
3. Remove the ADS Sensor [C] with the cover [D] (1screw).
4. Replace the ADS Sensor [C] (2 screws).
5. Assemble the copier.
6. Turn on the main switch and enter SP mode, then perform the Auto ADS initial setting (1 SP Adjustment-PAGE 5).

2.6 SCANNER DRIVE MOTOR



1. Remove the exhaust fan. (Refer to Scanner HP Sensor Replacement.)
2. Remove the tension spring [A].
3. Remove the tension tightener [B].

   NOTE: Re-install the tightener as follows;

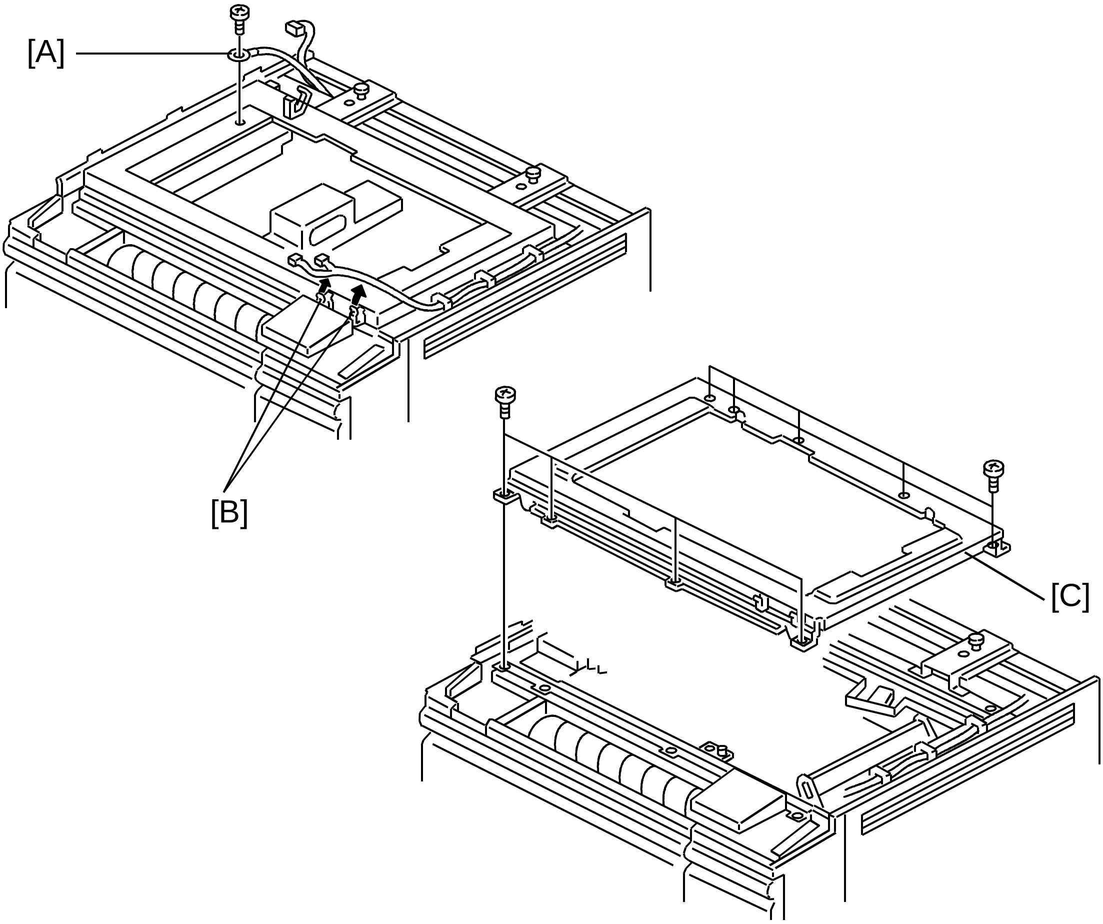
   1) Hook part [C] of the bracket on the screw [D] installed on the scanner drive motor bracket.
   2) Hook the tension spring [A].
   3) Install two screws.

4. Remove the two connectors [E] from the Optic Control Board.
5. Remove the scanner motor [F] (4 screws).

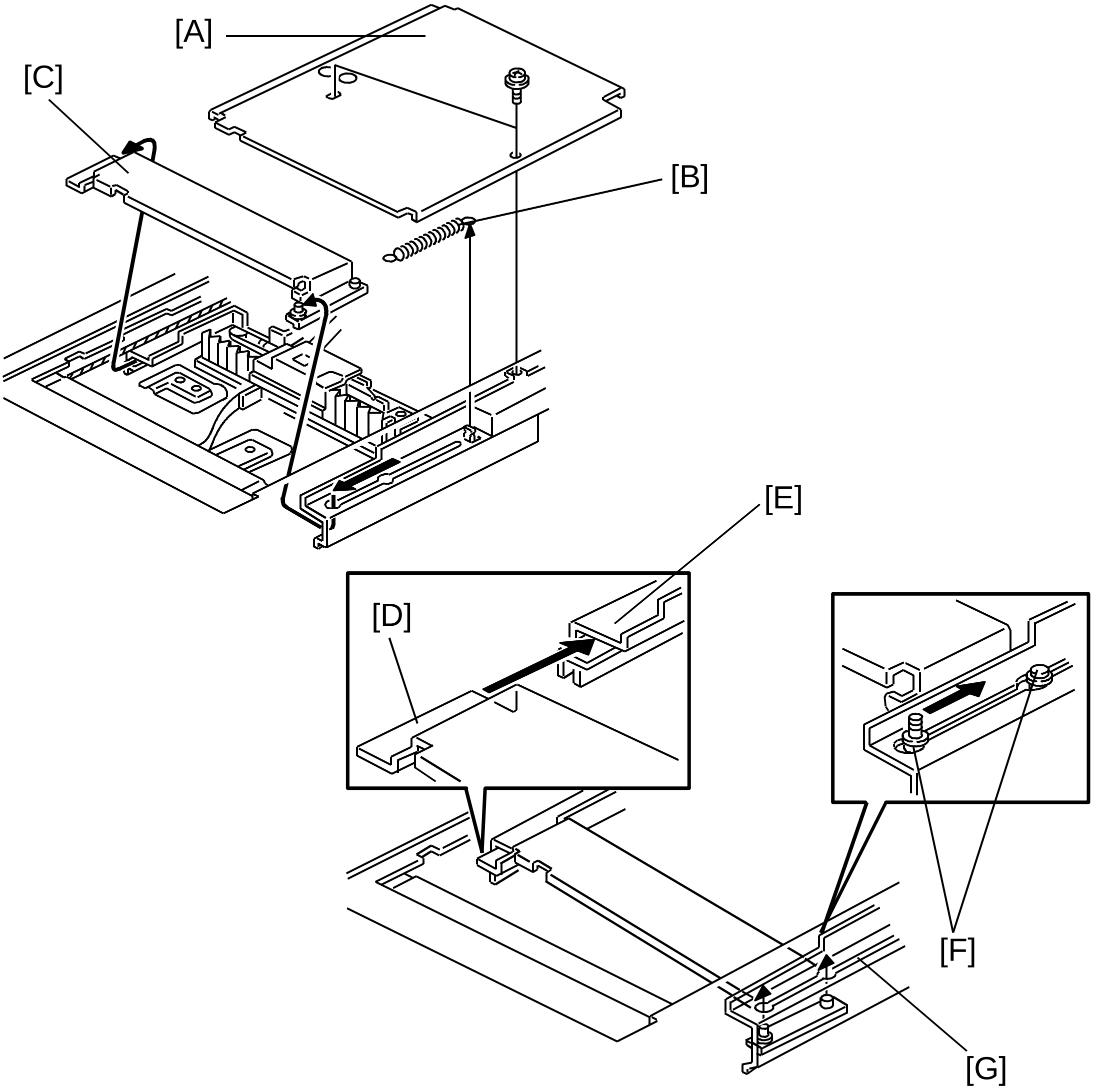
   NOTE: While replacing the drive pulley, the gap [G] should be 0.5mm so that the upper edge [H] of the pulley is lower than the upper surface [I] of the bracket, as shown. After installing the scanner motor, perform the scanner control adjustment. (Refer to Scanner Control Adjustment.)

2.7 SCANNER DRIVE WIRES REPLACEMENT

- Removal -

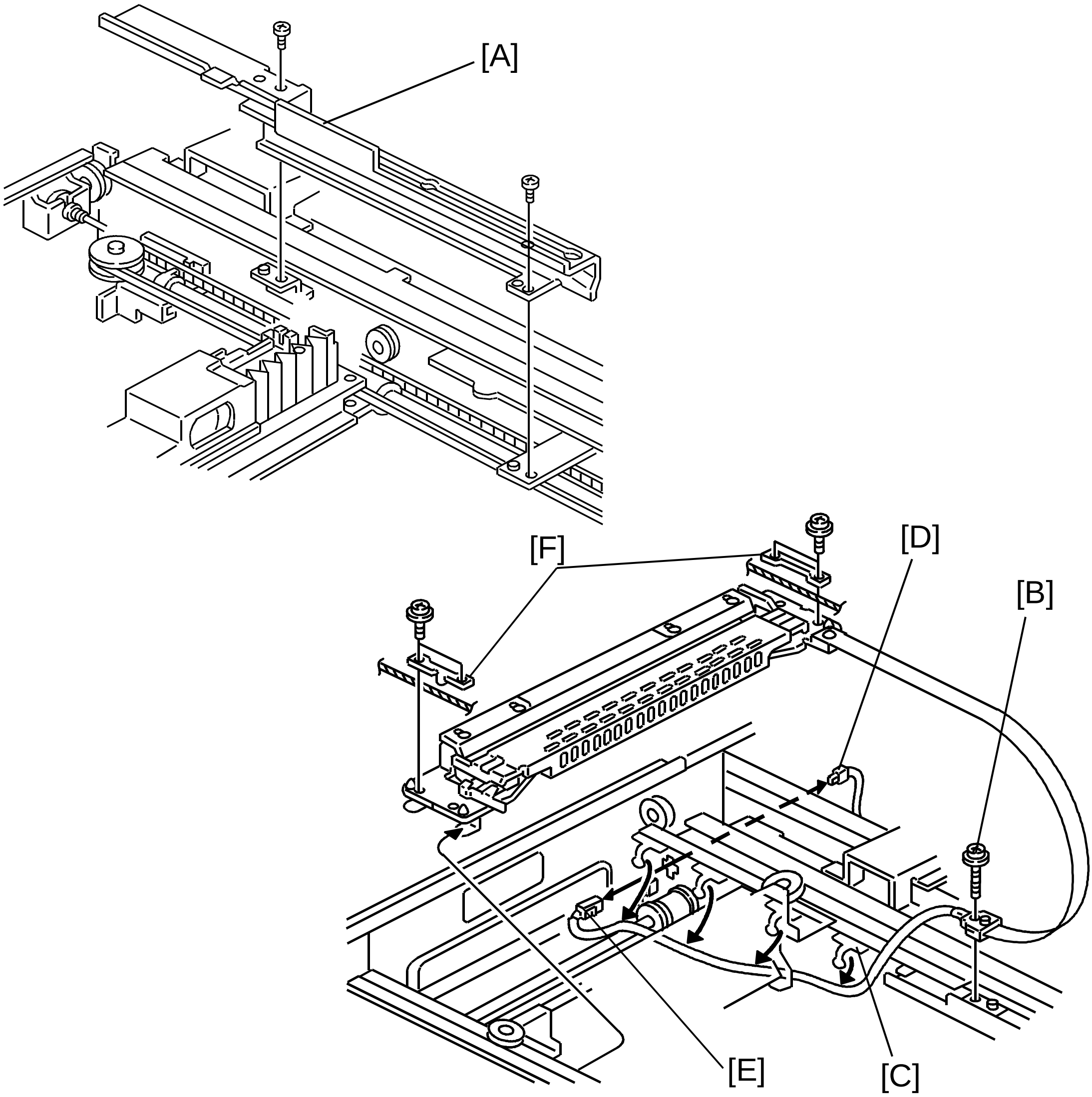


1. Turn off the main switch.
2. Remove the exposure glass.
3. Remove the upper cover and the rear upper cover.
4. Remove the optics thermistor [A] (1 screw, 1 harness clamp).
5. Remove the scanner HP sensor with bracket . (Refer to Scanner HP Sensor Replacement.)
6. Remove the scanner drive motor. (Refer to Scanner Drive Motor Replacement)
7. Unhook the harness from the two harness clamps [B].
8. Remove the upper optics frame [C] (9 screws).

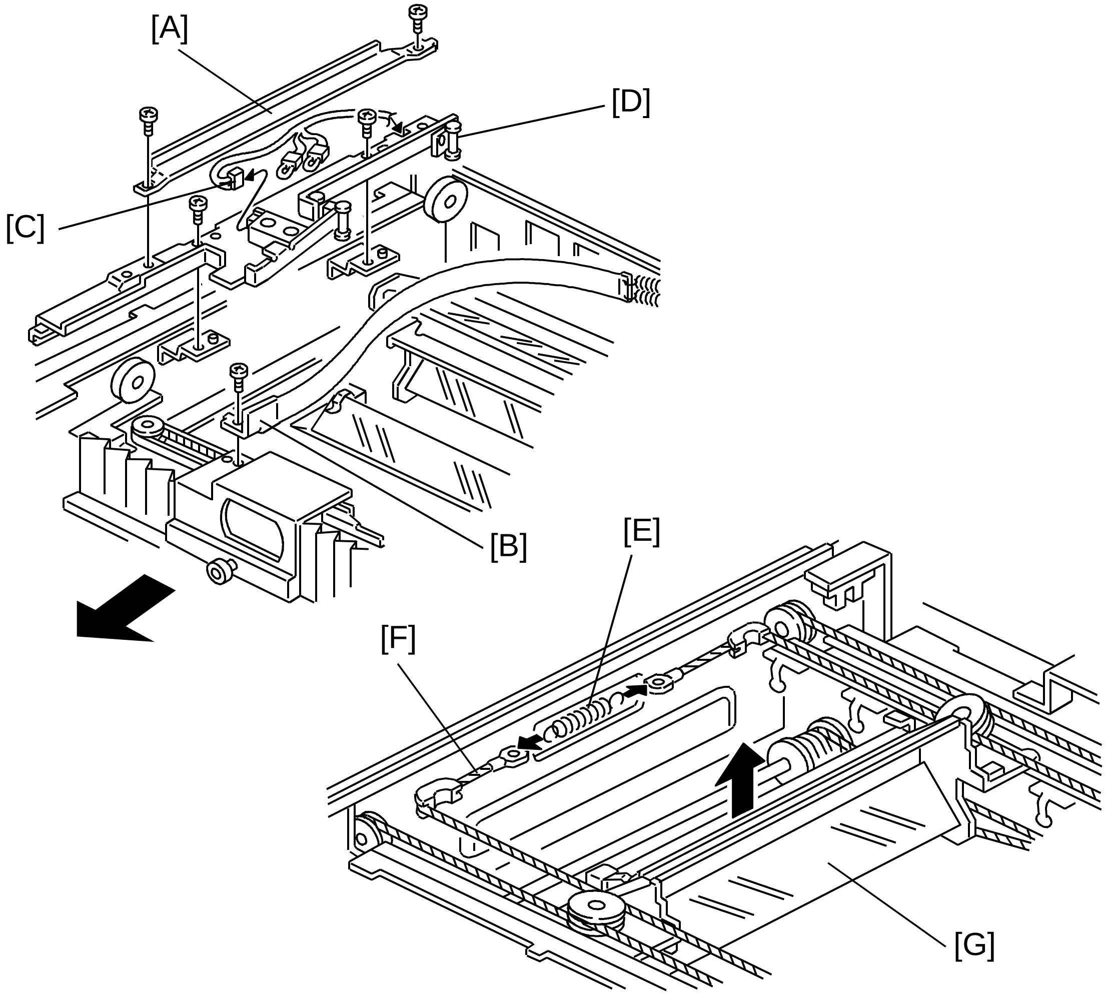


9. Remove the lens unit cover [A] (2 screws).
10. Unhook the tension spring [B].
11. Remove the lens shield plate [C].

NOTE: When installing the lens shield plate, set the rear part [D] of the lens shield plate between the guides [E] as shown. Then set the grooves on the guide pins [F] in the rail [G].
After reinstalling the tension spring, confirm that movement of the lens shield plate is smooth.



12. Remove the front bracket [A] (2 screws).
13. Remove the screw [B] securing the scanner flat cable.
14. Unhook the four harness clamps [C].
15. Disconnect the connector [D] outside the optic side frame.
16. Remove the connector [E] from the optic side frame.
17. Remove the scanner clamps [F] securing both sides of the first scanner unit to the scanner wires (4 screws).



18. Remove the harness cover [A] (2 screws).

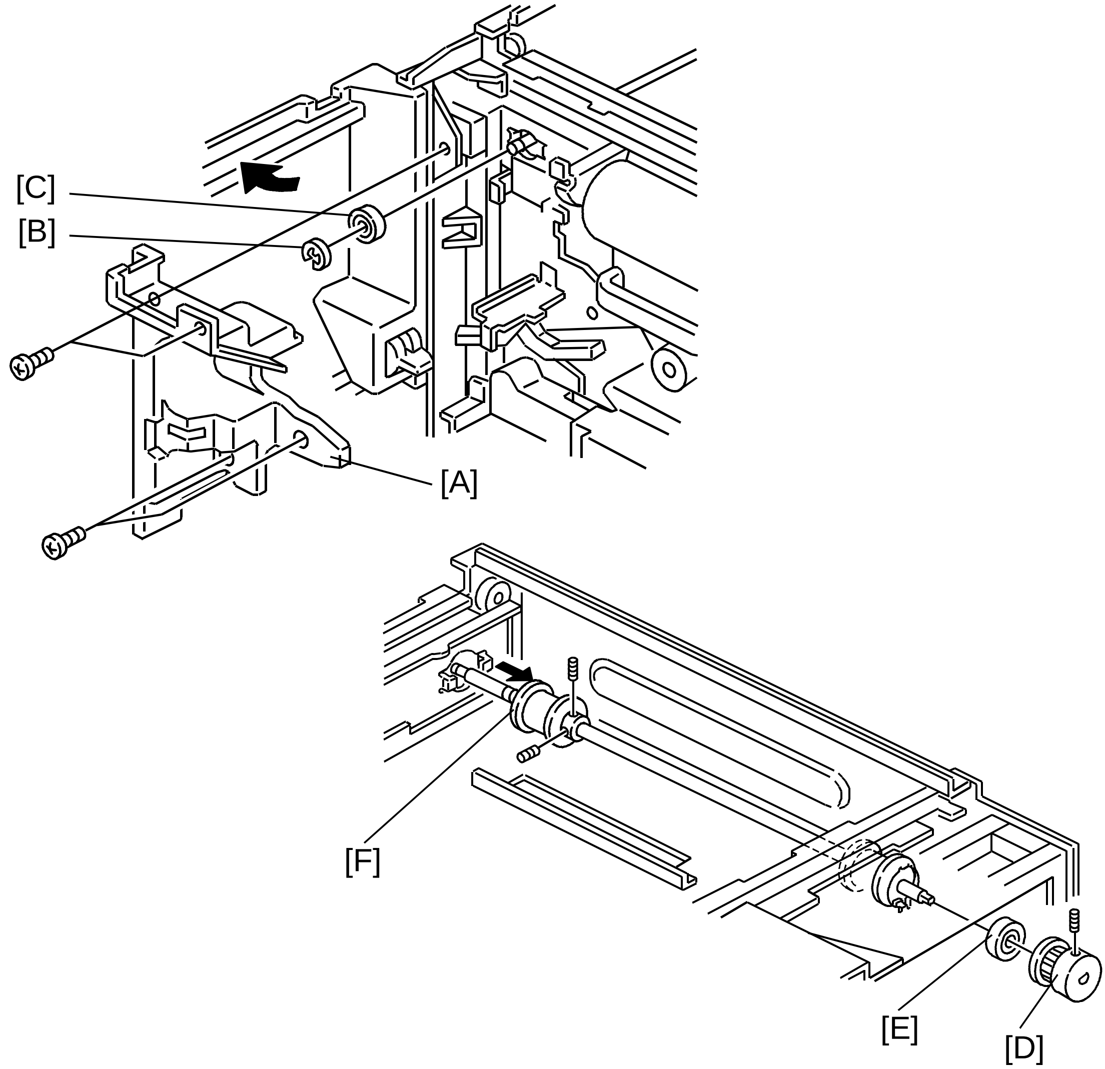
19. Remove the light shield mylar bracket [B] (1 screw).

20. Disconnect the paper length size sensor connector [C] and move the lens unit to the left, then remove the rear bracket [D] (2 screws).

21. Unhook the tension spring [E] and remove the scanner wire [F].

22. Remove the second scanner [G].

    NOTE: When re-installing the mylar bracket [B], be sure not to create any gap between the bracket and the lens cover.



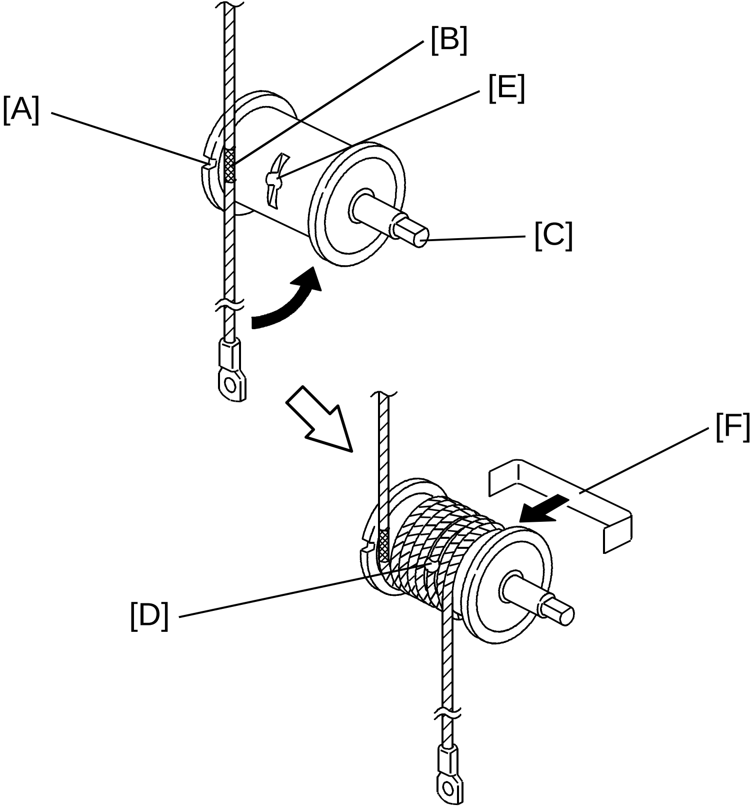
23. Remove the left inner cover [A] (4 screws).

24. Remove the E-ring [B] of the scanner drive shaft and remove the front ball bearing [C].

25. Remove the rear drive pulley [D] (1 Allen screw) and remove the rear ball bearing [E].

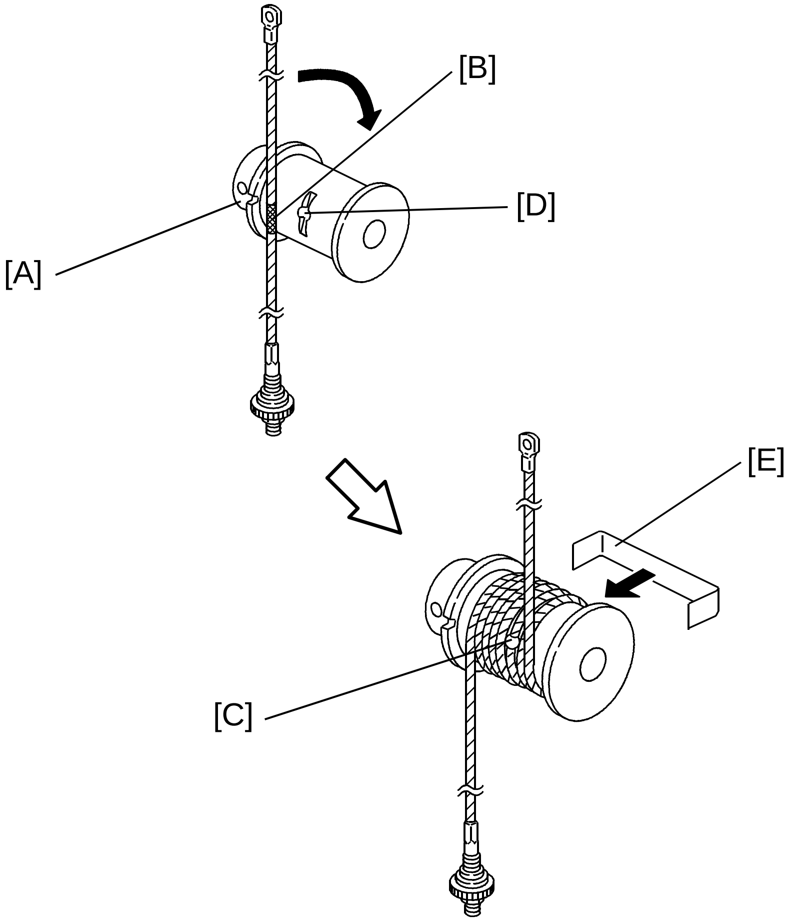
26. Loosen the two Allen screws of the front drive pulley [F] and slide the pulley about 10 cm to the rear then take out the drive shaft.

- INSTALLATION -



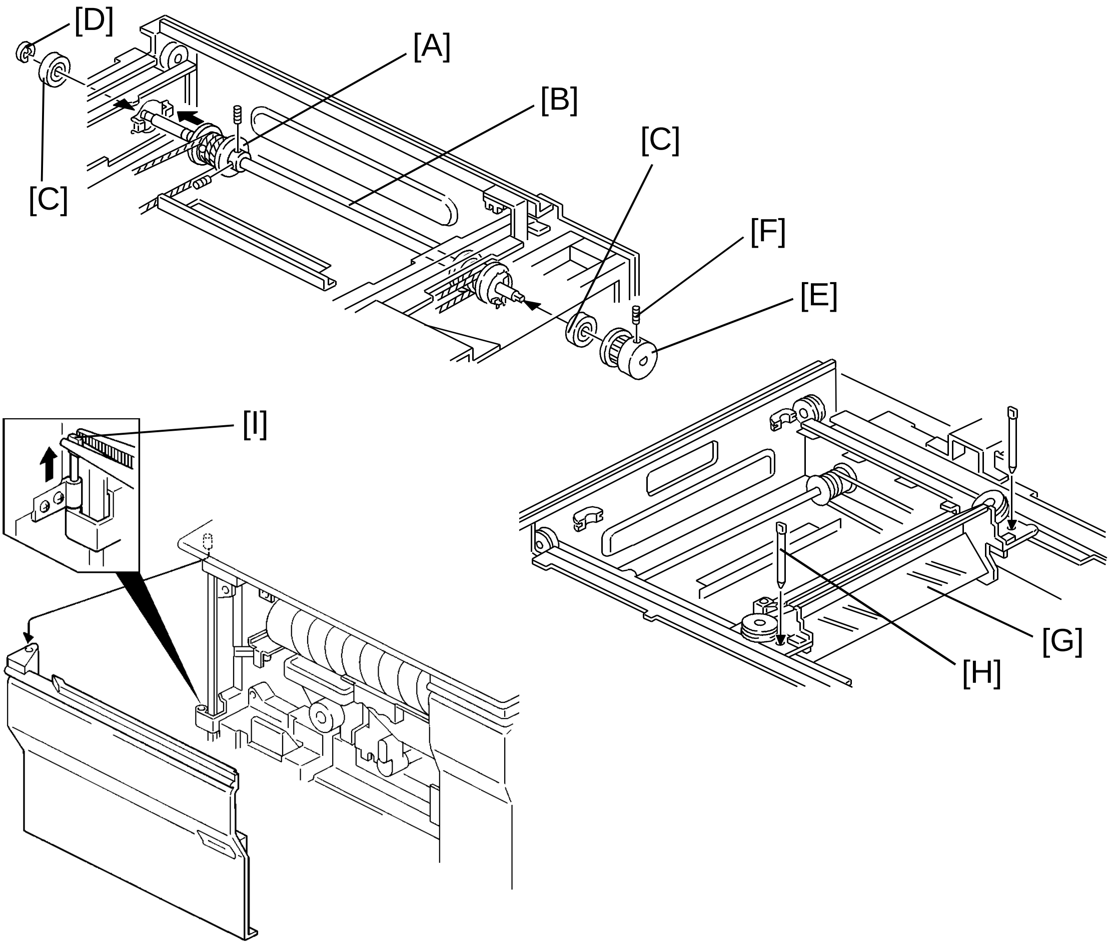
1. Round the rear scanner drive wire on the rear pulley as follows:

   1) Align the cut out [A] on the edge of the rear drive pulley and the blue mark [B] on the wire as shown.
   2) Round the wire counterclockwise 5 times as shown (in the illustration, the D-cut [C] on the shaft is at the front side) then set the bead [D] on the wire in the hole [E] on the pulley.
   (In this condition, the bead just reaches the hole on the pulley.)
   3) After setting the bead in the hole, round the wire two more times (in total 7 times).
   4) Fix the wire with tape [F] as shown.



2. Round the front scanner drive wire on the front pulley as shown:

   1) Align the cut out [A] on the edge of the front drive pulley and the red mark [B] on the wire.
   2) Round the wire clockwise 5 times as shown (in the illustration, the Allen screw holes are at the rear side) then set the bead [C] on the wire in the hole [D] on the pulley.
      (In this condition, the bead just reaches to the hole on the pulley.)
   3) After setting the small ball in the hole, round the wire twice more (in total 7 times).
   4) Fix the wire with tape [E] as shown.



3. Set the front drive pulley [A] on the drive shaft. (Leave the Allen screws loosened.)

4. Place the scanner drive shaft [B] in the holes on the optics front and rear side frames.

5. Set ball bearings [C] on both sides of the scanner drive shaft.

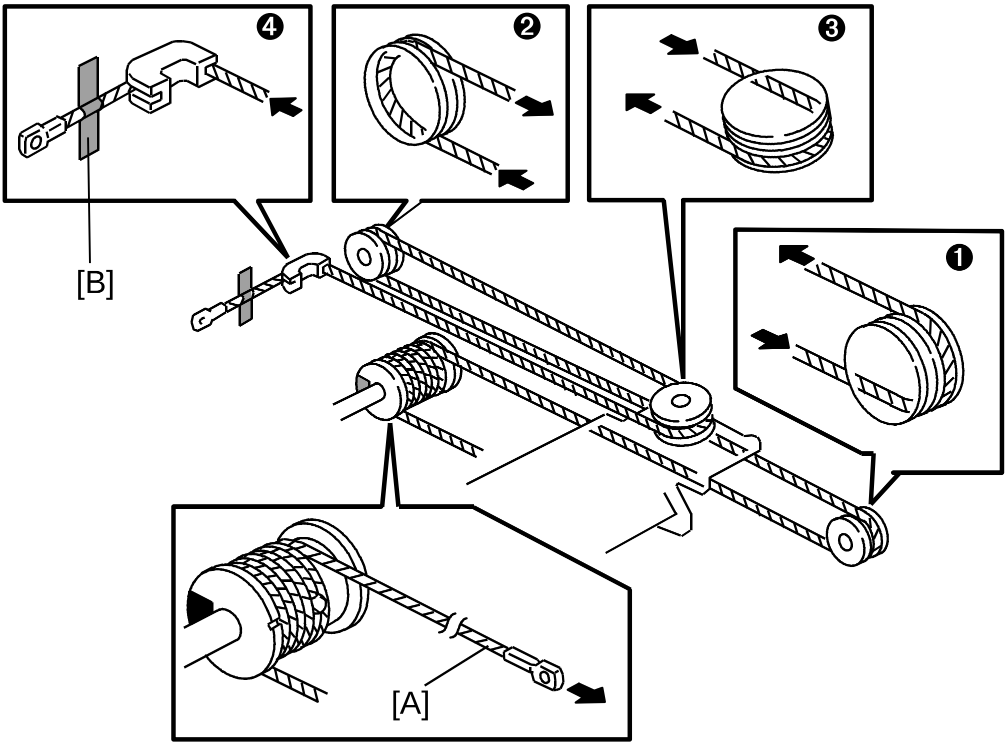
6. Set the E-ring [D] on the front end of the scanner drive shaft.

7. Set, and fully push in, the scanner drive pulley [E] on the front end of the scanner drive shaft, then tighten the Allen screw [F].

8. Install the scanner drive motor. (Refer to Scanner Drive Motor Replacement.)

9. Place the second scanner [G] on the guide rail and fix it there by using two jig pins [H].

   NOTE: This jig pin is used as the left door hinge pin [I]. However, only one pin is used on the copier, so it is necessary to prepare another one.



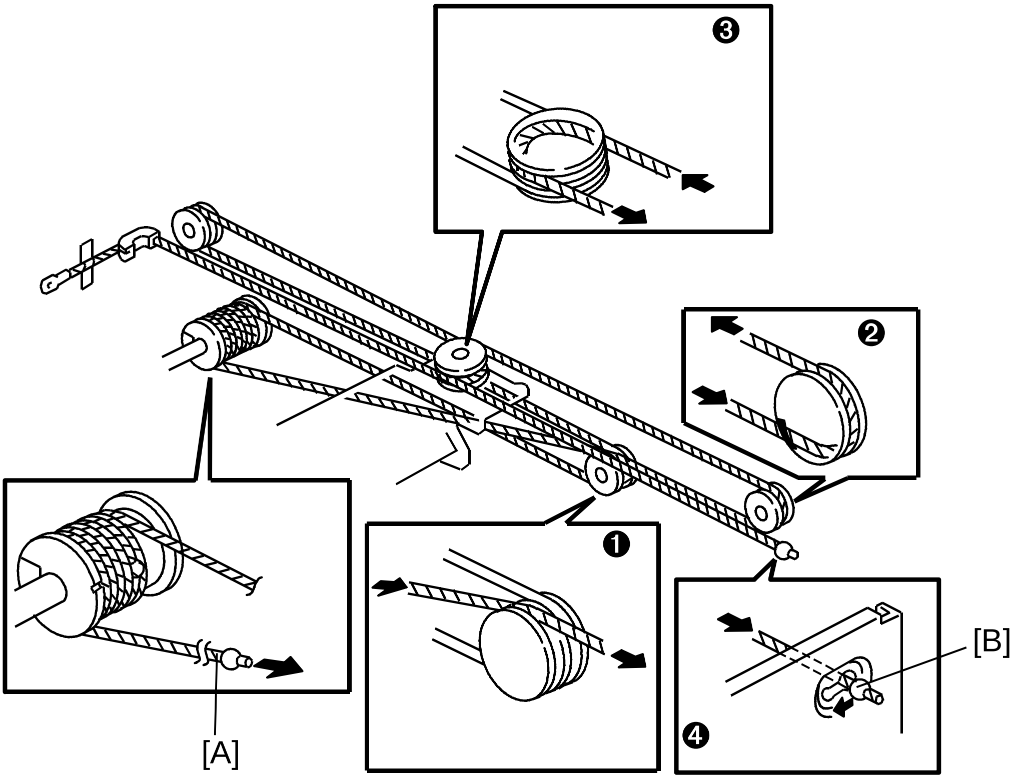
10. Route the shorter end [A] of the rear scanner drive wire in the following order.

❶ Rear track counterclockwise

❷ Clockwise

❸ Lower track clockwise.

❹ Fix the end of the wire on the frame with tape [B].



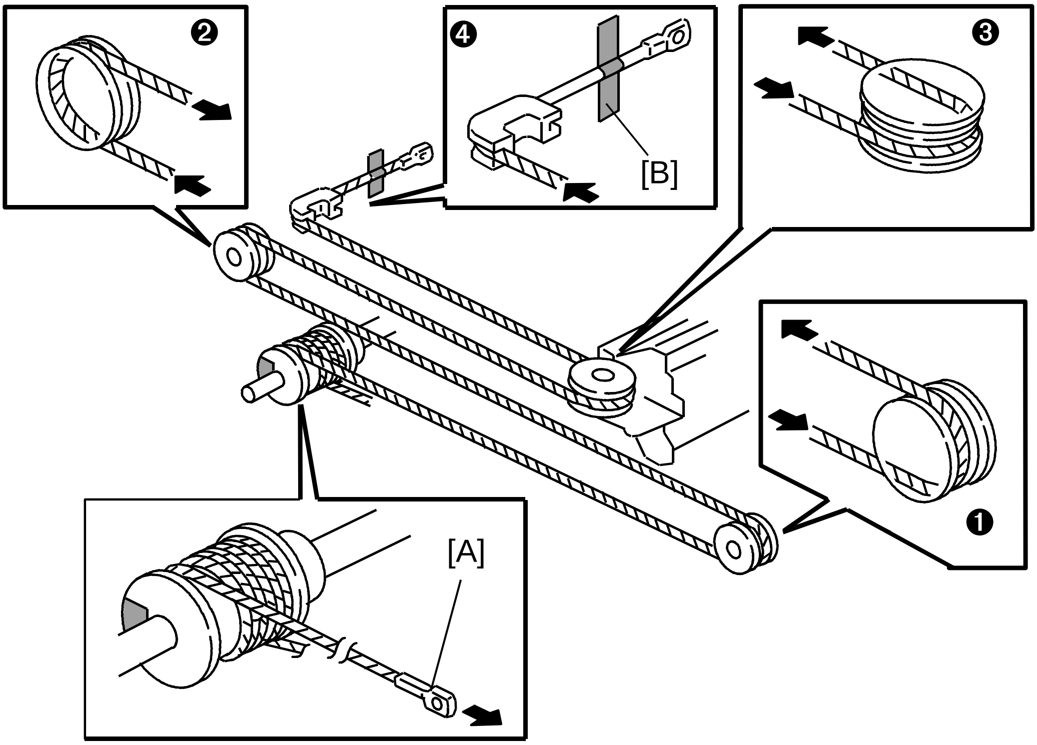
11. Route the longer end [A] of the rear scanner drive wire in the following order.

❶ Through front track, upper side.

❷ Counterclockwise.

❸ Upper track counterclockwise.

❹ Hook the end [B] of the wire on the cutout on the right optics side frame.



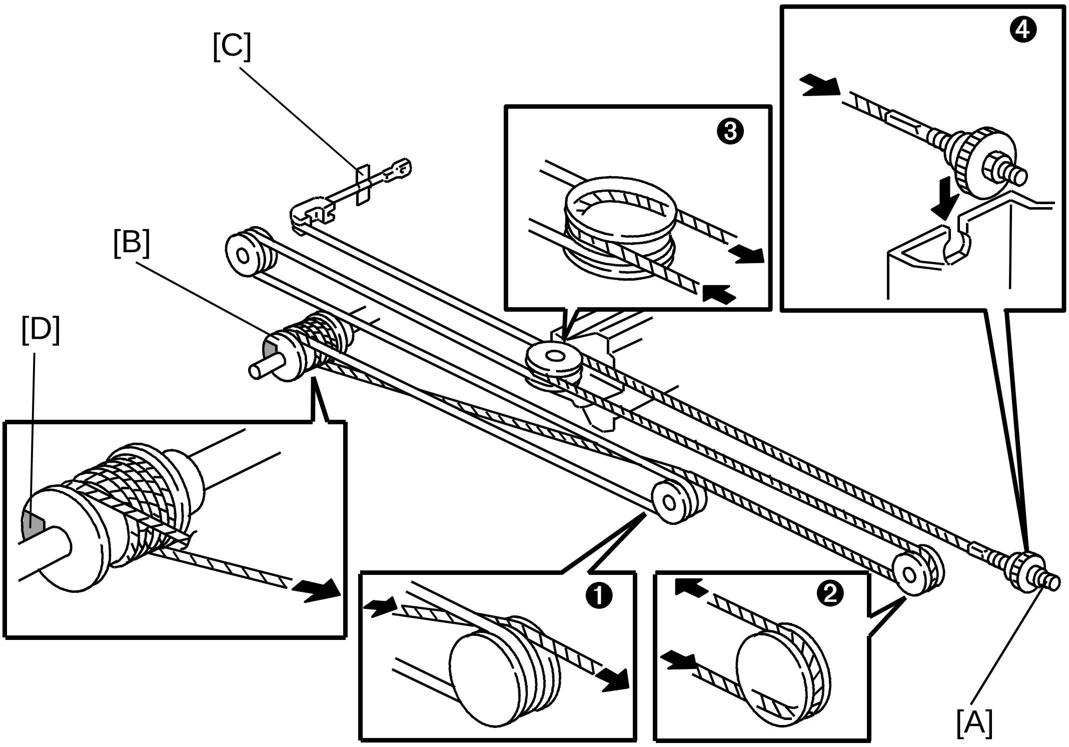
12. Route the shorter end [A] of the front scanner drive wire in the following order.

❶ Front track counterclockwise

❷ Clockwise

❸ Lower track clockwise.

❹ Fix the end of the wire on the frame with tape [B].



13. Route the longer end [A] of the front scanner drive wire in the following order.

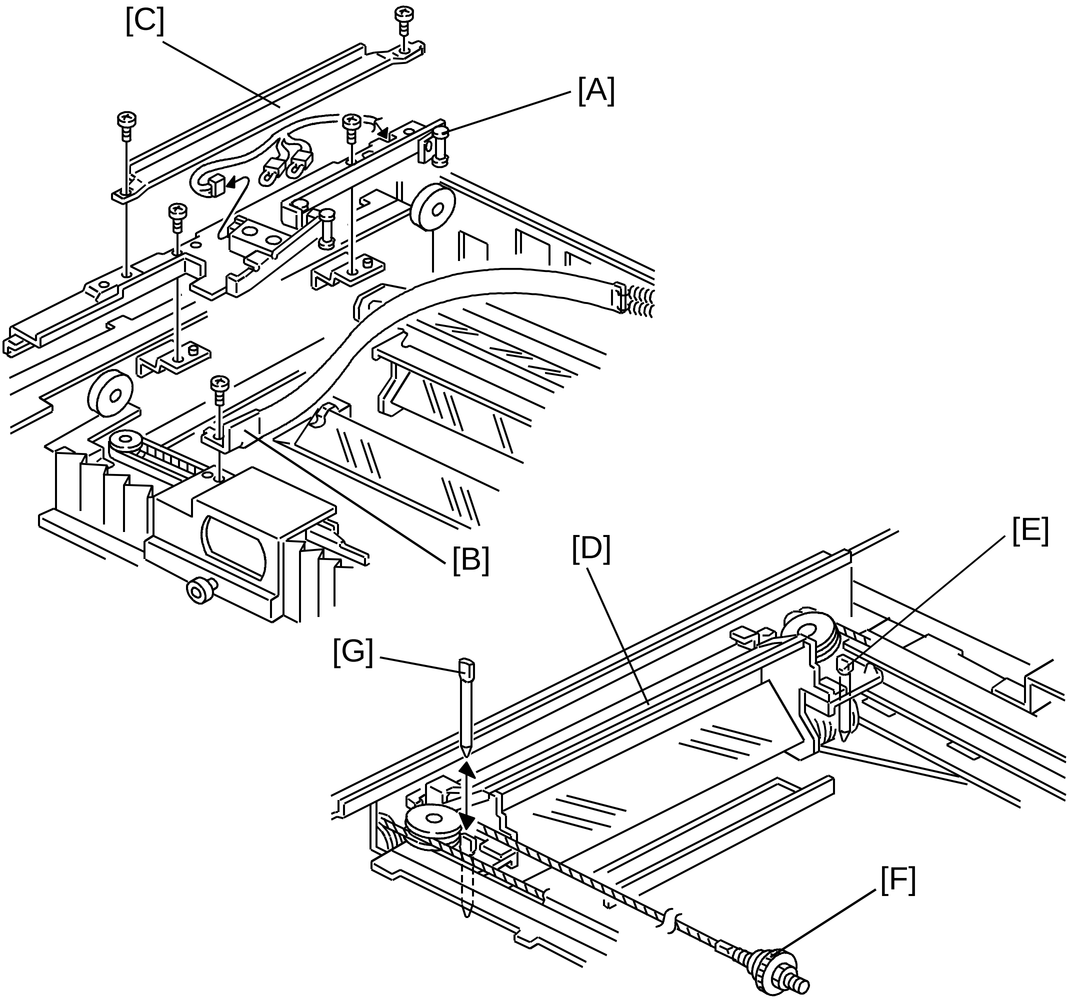
    ❶ Through rear track, upper side.

    ❷ Counterclockwise.

    ❸ Upper track clockwise.

    ❹ Hook the end of the wire [A] on the cut out on the right optics side frame.

14. Slightly push the front drive pulley [B] against the front optics side frame and tighten the two Allen screws.
15. Remove the jig pins securing the second scanner.
16. Remove the tapes [C] fixing the ends of the scanner drive wires and hook the ends of the scanner drive wires with the tension springs.
17. Remove the tapes [D] fixing the wire to the front and rear drive pulleys.

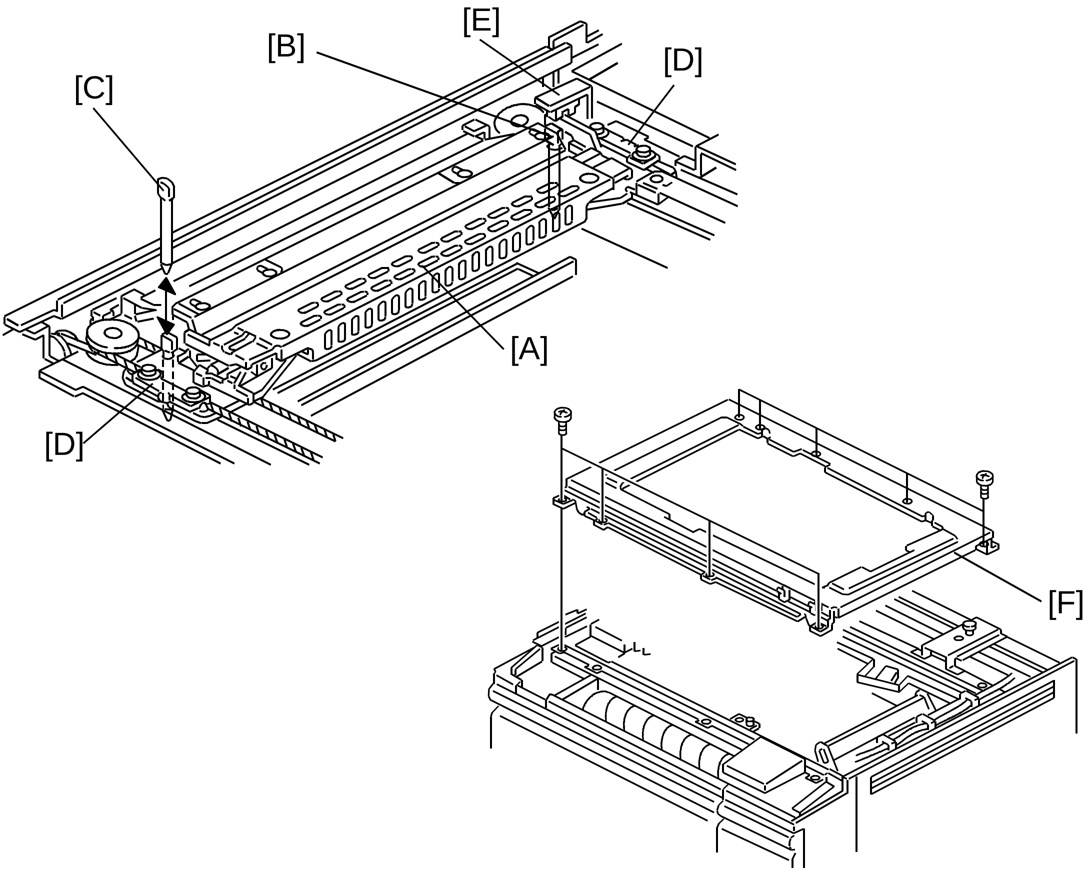


18. Install the rear bracket [A] (2 screws, 1 connector), shielding mylar bracket [B] (1 screw) and harness cover [C] (2 screws).

19. Adjust the second scanner alignment as follows:

- Second Scanner Alignment -

1) Move the second scanner [D] to the left end position. Fix the rear side of the second scanner by inserting the jig pin [E] in the holes on the rear side of the second scanner and the rear guide rail.
2) Turn the adjusting nut [F] to adjust the second scanner alignment so that the jig pins [G] can be smoothly set in the holes on the front side of the second scanner and the front guide rail.



20. Place the first scanner unit on the guide rail then adjust the first scanner alignment as follows:

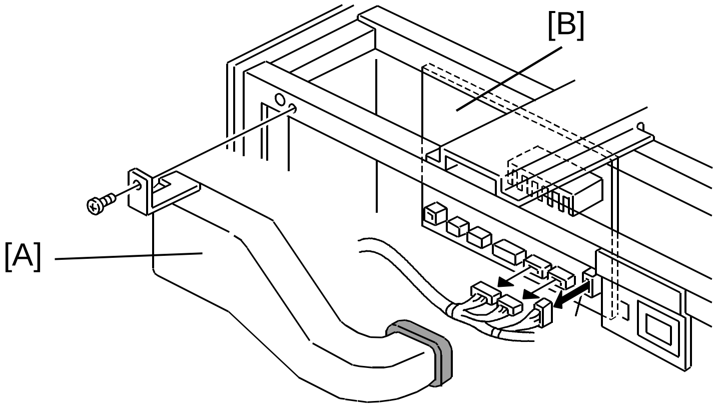
- First Scanner Alignment -

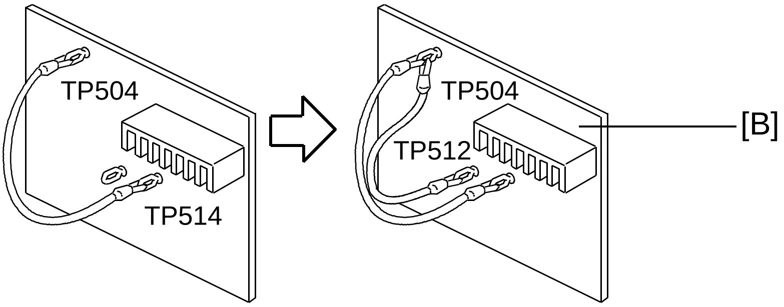
1) Move the first scanner [A] to the left end position. Fix the rear end of the first scanner by inserting the jig pin [B] in the holes on the first scanner and the guide rail.
2) Position the first scanner so that the jig pin [C] can be smoothly set in the holes on the first scanner and the guide rail, then tighten the wire clamp brackets [D] (4 screws).

21. Install the scanner HP sensor [E] (1 screw).

22. Secure the scanner flat cable (1 screw).

23. Install the upper optics frame [F] (9 screws).





24. Turn on the main switch and perform the scanner free run for about 5 minutes to break in the wires and to confirm correct scanner movement as follows:

- Scanner Free Run -

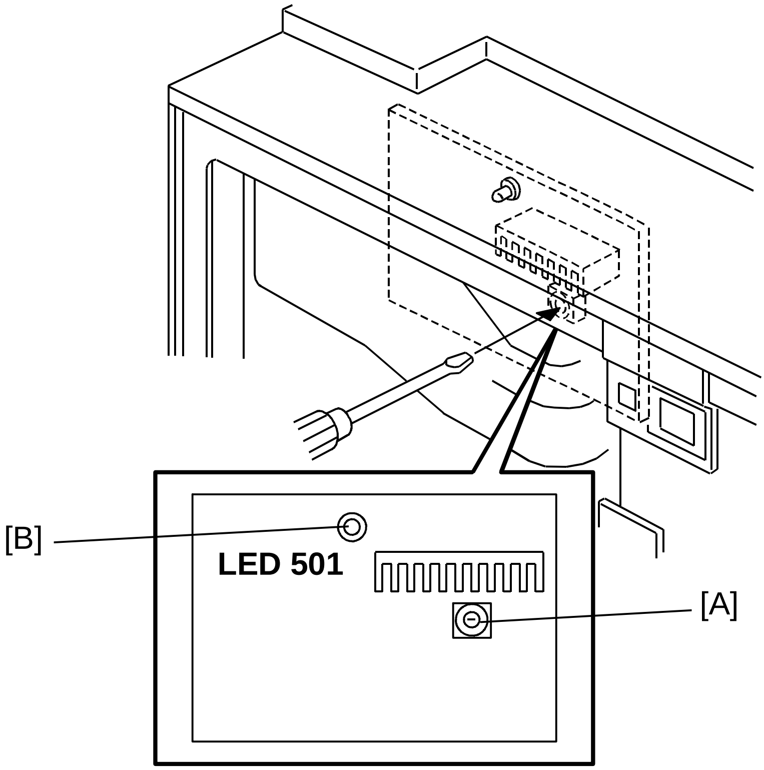
1. Remove the air inlet duct [A] (1 screw).
2. Remove CN502, CN503, CN504 from the optic control Board [B].
3. Short-circuit TP514 and TP504(GND) on the optics control Board.
4. Turn on the main switch.
5. Short-circuit TP512 and TP504(GND), then the machine automatically starts the scanner free run.
6. Turn off the main switch.

25. After performing the scanner free run, check the second scanner alignment, then the first scanner alignment.

26. Perform the scanner control adjustment. (Refer to Scanner Control Adjustment.)

27. Check the copy image.

2.8 SCANNER CONTROL ADJUSTMENT



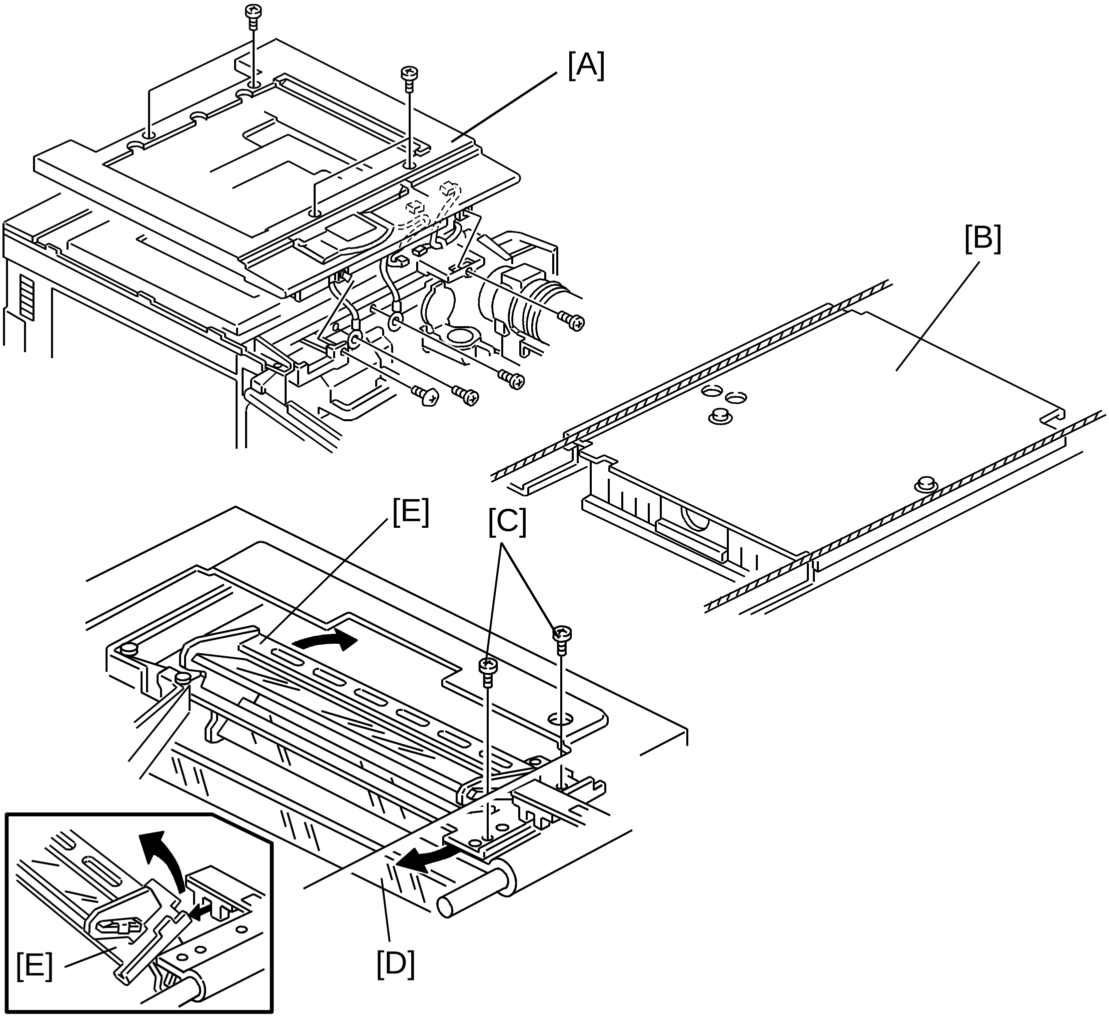
Perform this adjustment under any one of the following conditions:

After the scanner motor replacement
After the scanner wire replacement
After the scanner timing belt replacement
After replacing the optics control Board

1. Perform the free run (2 Test Mode – PAGE 1) 30 times.
2. After the free run is completed, turn the rotary dip switch [A] until LED 501 [B] turns on.

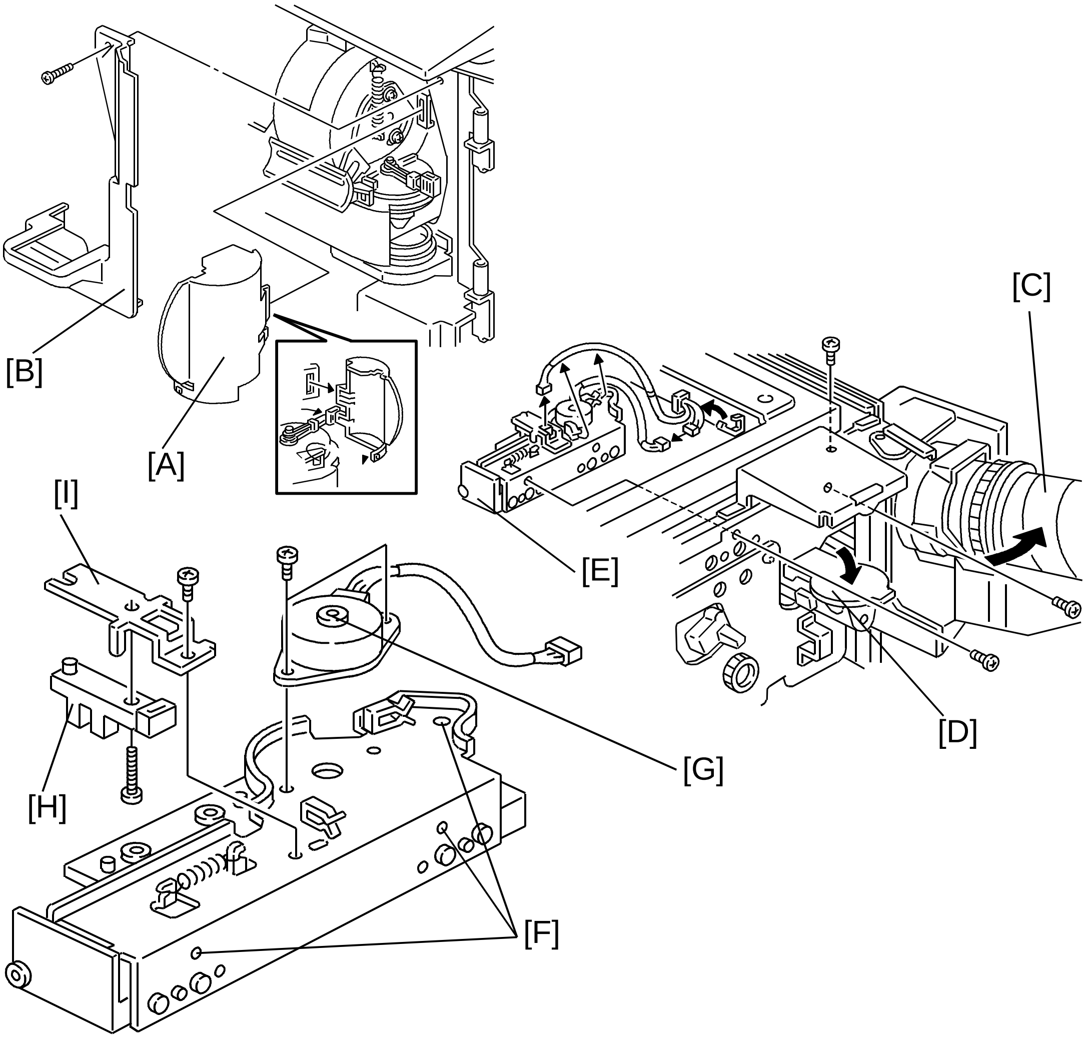
NOTE: If this adjustment is improper, the timing between the scanner and the paper feed will be also improper, causing paper jams at the registration roller, or causing scanner noise due to wire vibration.

2.9 THIRD SCANNER REMOVAL



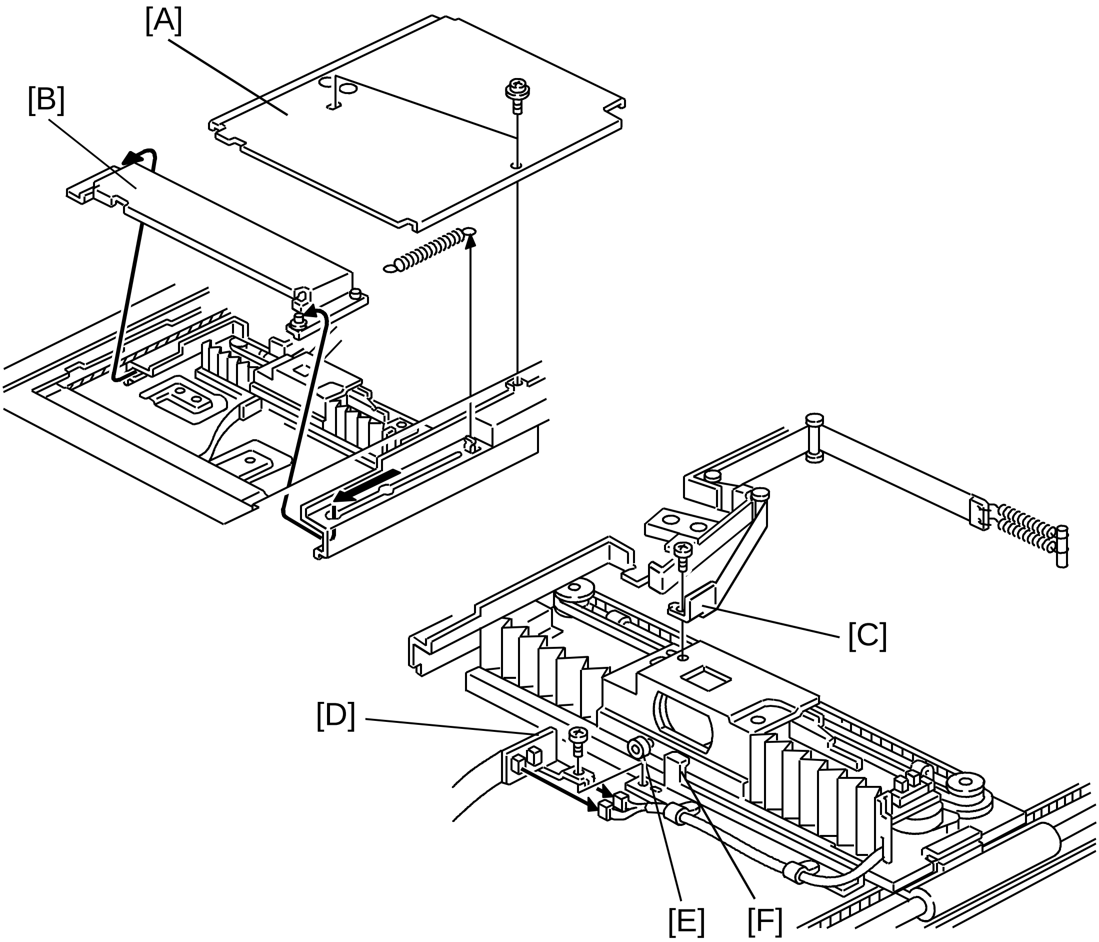
1. Remove the exposure glass. (Refer to Exposure Glass Removal.)
2. Remove the upper cover [A]. (Refer to Upper Cover Removal.)
3. Remove the lens unit cover [B] (2 screws).
4. Remove the two screws [C] fixing the front third scanner bracket.
5. Remove the sixth mirror [D].
6. Remove the third scanner [E] as shown.

2.10 THIRD SCANNER DRIVE MOTOR / HP SENSOR REPLACEMENT



1. Remove the third scanner unit. (Refer to the Third Scanner Removal.)
2. Open the right front cover then remove the shutter cover [A].
3. Remove the shutter inner cover [B] (1 screw).
4. Open the toner bottle [C] and close the toner hopper cover [D].
5. Remove the third scanner drive unit [E] (3 screws [F]).
6. Replace the third scanner drive motor [G] (1 connector, 2 screws).
7. Remove the third scanner HP sensor [H] with the bracket [I] (1 screw).
8. Replace the third scanner HP sensor (1 screw).

2.11 LENS HORIZONTAL DRIVE BELT REMOVAL

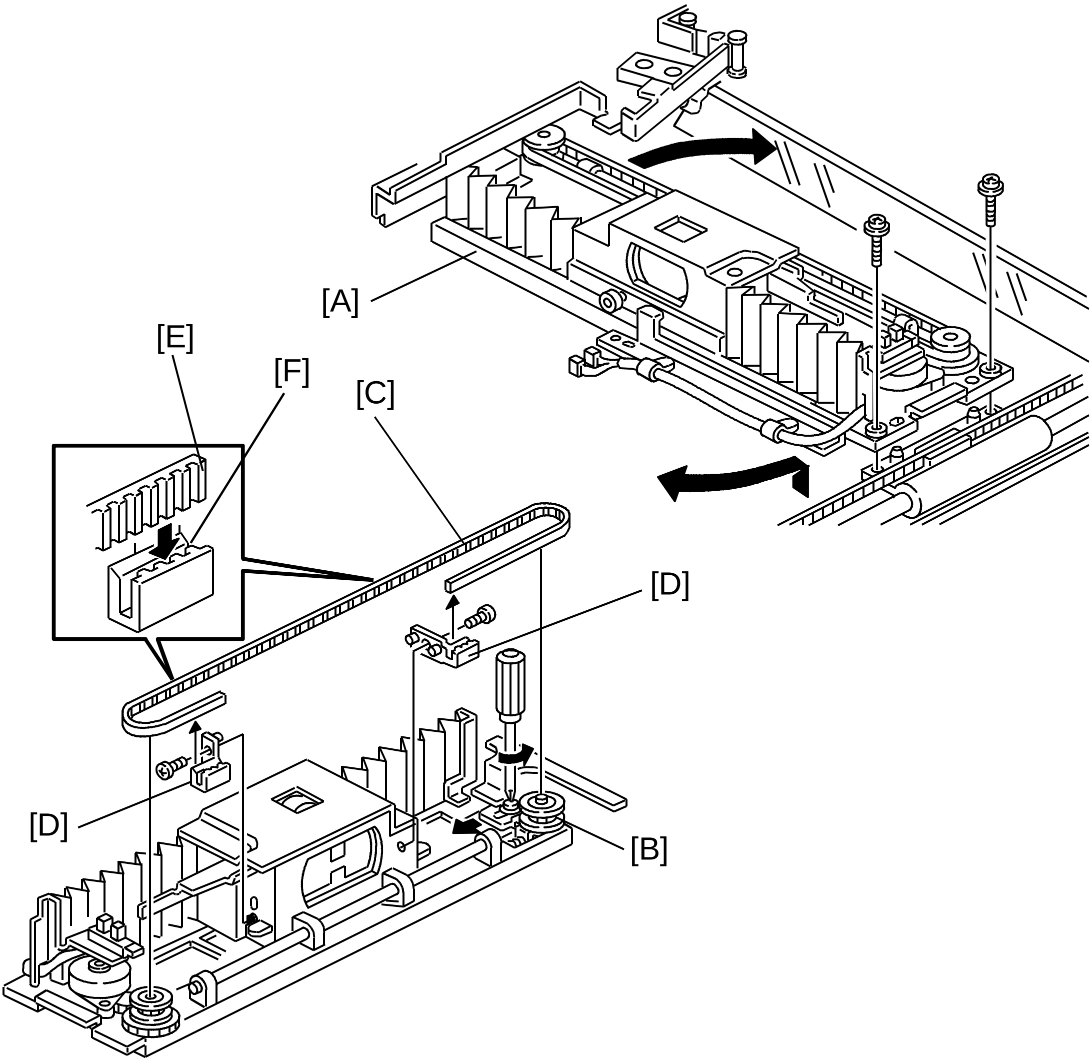


1. Remove the lens unit cover [A] and light shielding plate [B]. (Refer to Scanner Drive Wires Replacement.)

2. Remove the light shielding mylar bracket [C] (1 screw).

   NOTE: When re-installing the mylar bracket [C], be sure not to create any gap between the bracket and the lens cover.

3. Remove the flat cable bracket [D] (1 screw, 2 connectors).
4. Position the roller [E] underneath the bracket [F].



5. Remove the lens unit [A] (2 screws).

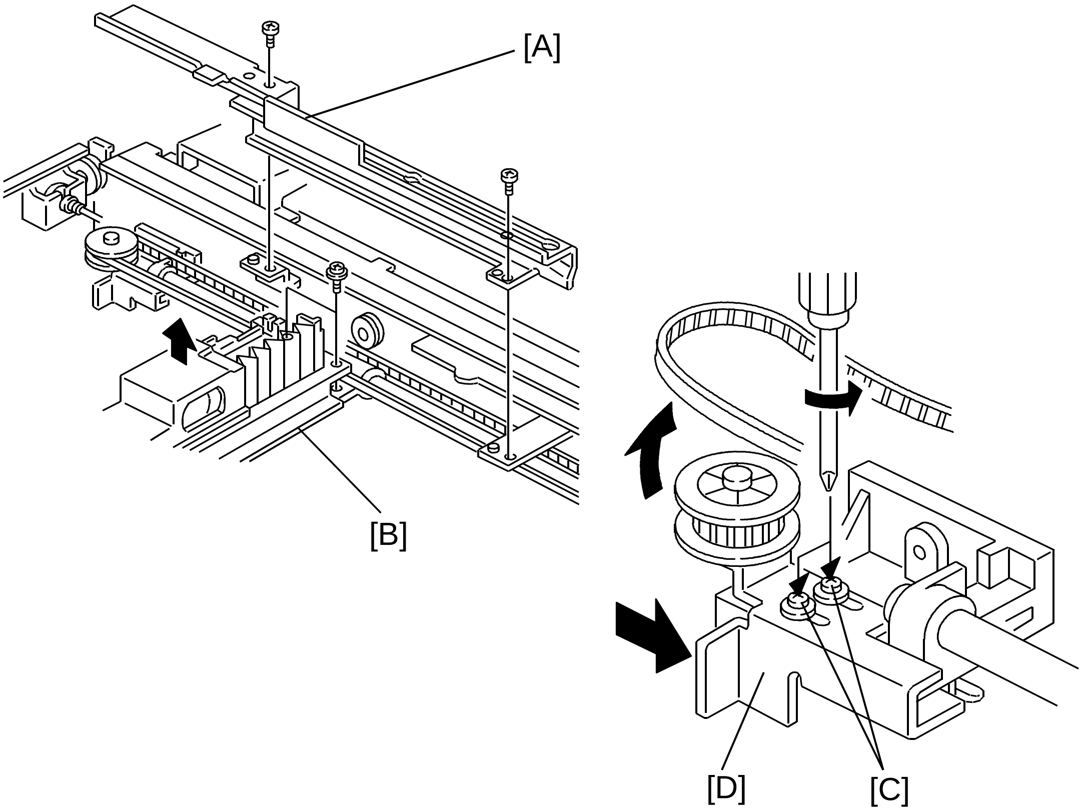
6. Loosen the tension pulley bracket [B] (1 screw).

7. Push the pulley bracket to the front then unhook the timing belt [C].

8. Remove the two timing belt holders [D] (1 screw each).

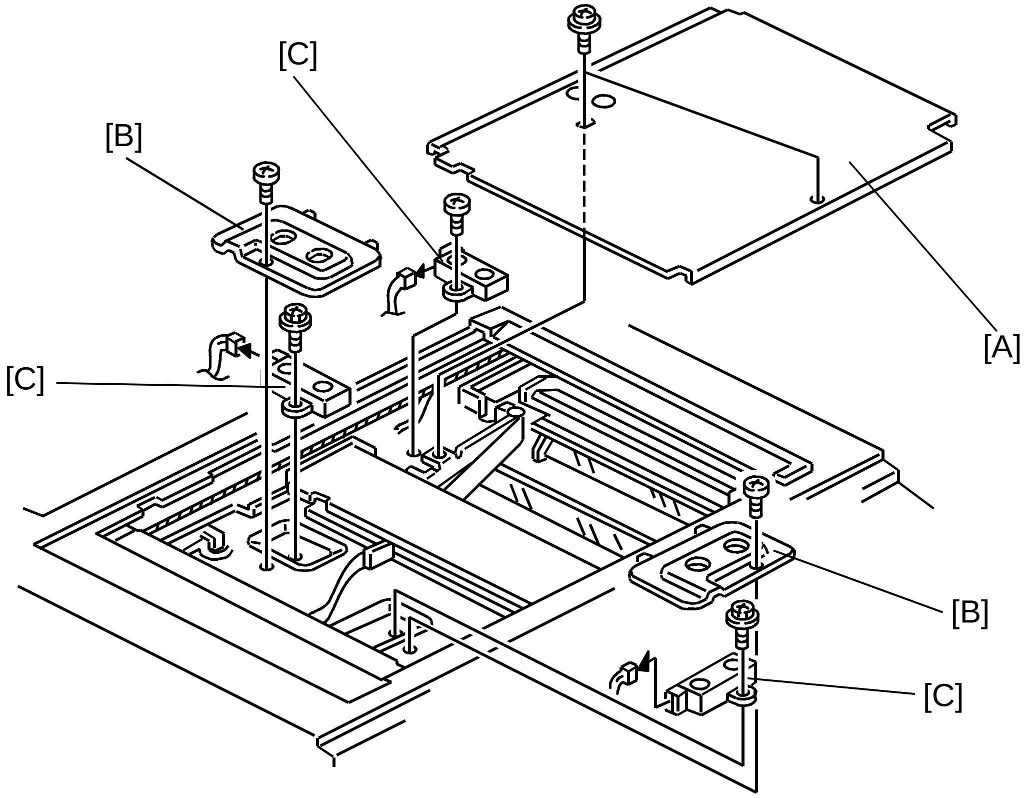
NOTE: When setting the timing belt, align the end [E] of the timing belt to the edge [F] of the belt holder.

2.12 LENS VERTICAL DRIVE BELT REMOVAL



1. Remove the third scanner drive unit. (Refer to Third Scanner Drive Motor Replacement.)
2. Remove the front bracket [A]. (Refer to Scanner Drive Wires Replacement.)
3. Remove the lens unit [B]. (Refer to Lens Horizontal Drive Belt Replacement.)
4. Loosen the two screws [C] fixing the tension pulley bracket [D].
5. Push the tension pulley bracket to the left (front view) then unhook the timing belt.

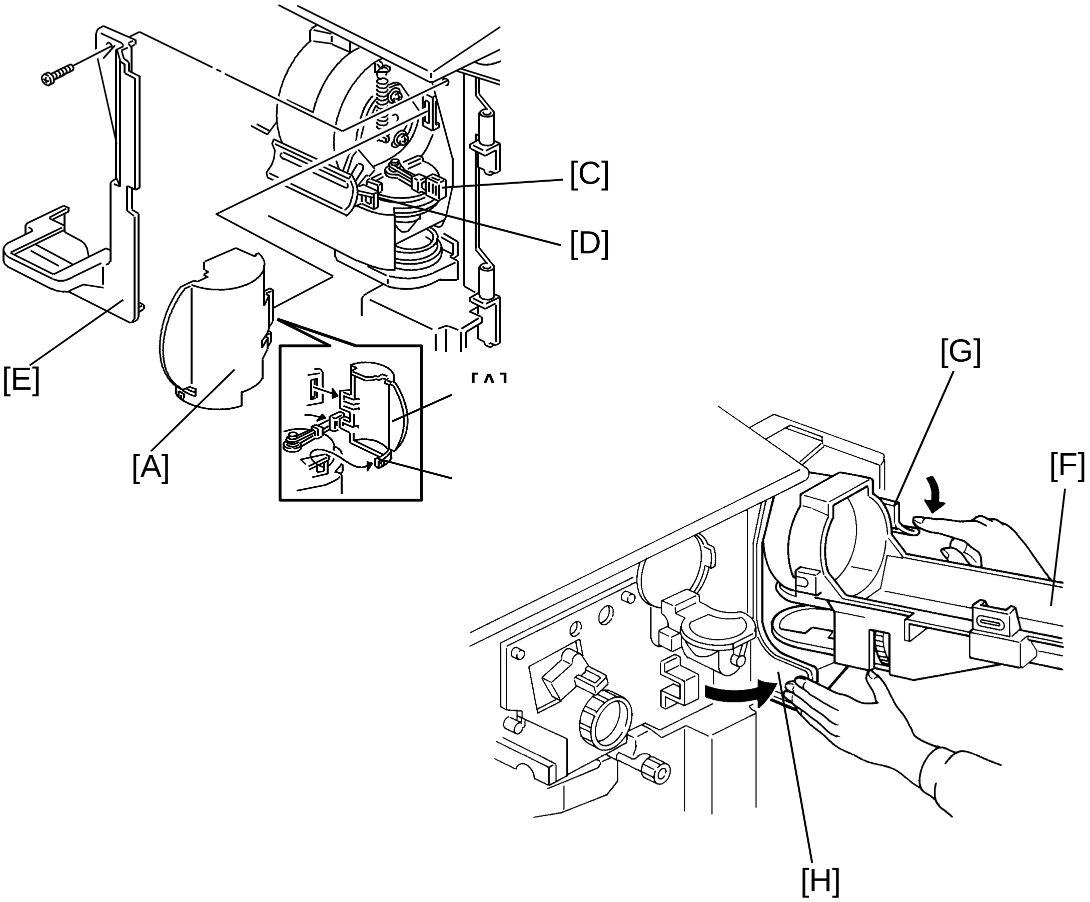
2.13 ORIGINAL SIZE SENSORS (2 LENGTH SENSORS, 1 WIDTH SENSOR)



1. Remove the exposure glass. (Refer to Exposure Glass Removal.)
2. Remove the lens unit cover [A] (2 screws).
3. Remove the original size sensor covers [B] (1 screw each).
4. Replace each original size sensor [C] (1 screw, 1 connector each).

3. DEVELOPMENT AND TONER SUPPLY

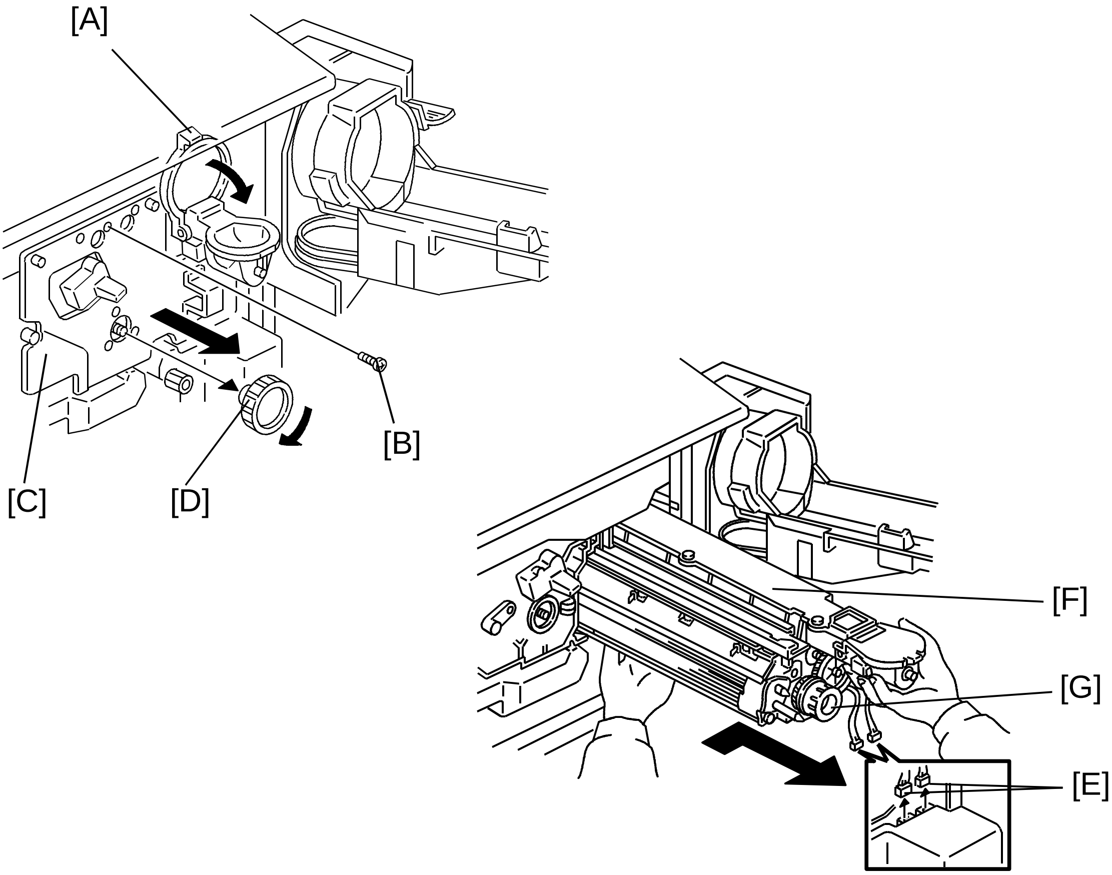
3.1 DEVELOPMENT UNIT REMOVAL



1. Turn off the main switch.
2. Open the front doors.
3. Remove the shutter cover [A] by releasing the hook [B].

   NOTE: Be sure to move the lever [C] until it contacts part [D] (fully to the front).
4. Remove the shutter inner cover [E] (1 screw).
5. Open the toner bottle holder [F].

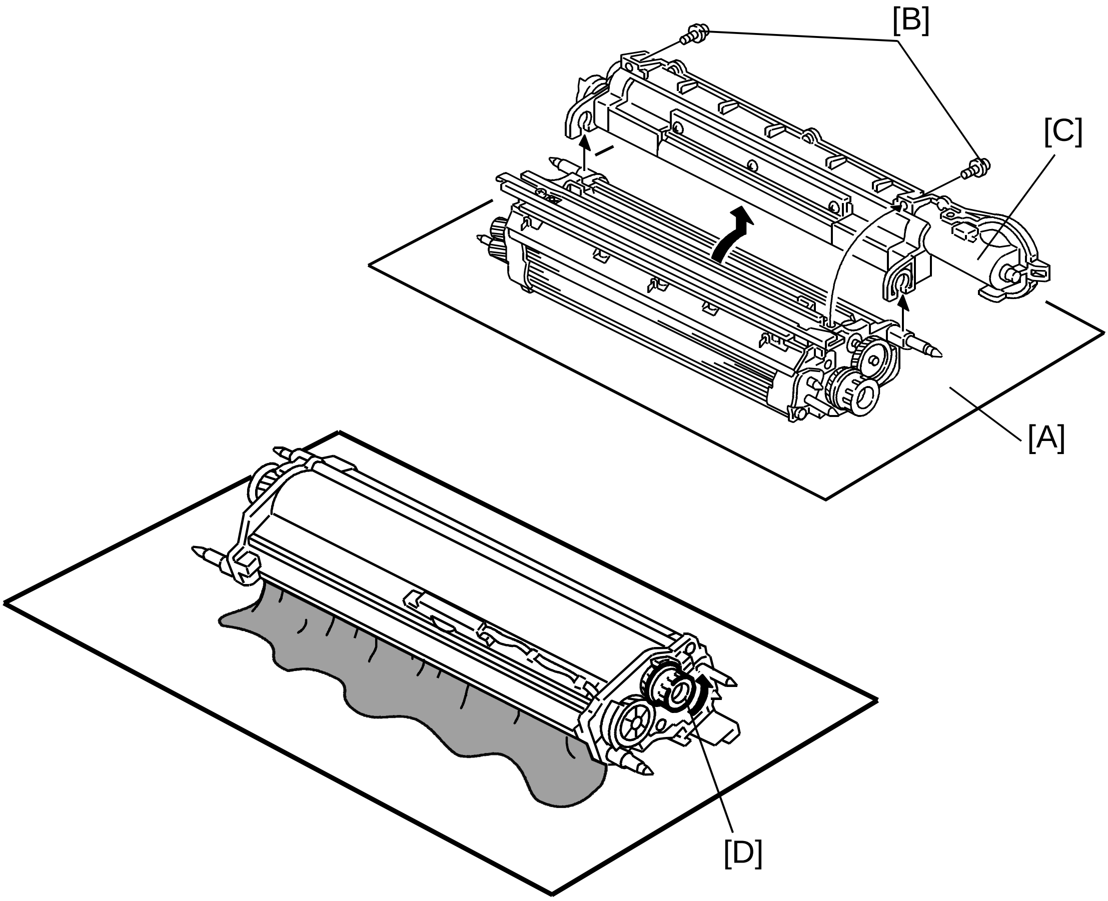
   NOTE: To open the toner bottle holder completely, while lowering the shutter lever [G], push the bracket [H] to the right.



6. Close the toner hopper cap [A].
7. Remove the screw [B] fixing the drum stay [C].
8. Remove the drum stay knob [D] then take out the drum stay.
9. Disconnect the two connectors [E].
10. Pull out the development unit [F].

NOTE: 1. To prevent drum scratches, push the development unit to the right while pulling it out.
2. When installing the development unit, do not forget to set the two connectors [E].
3. When installing the drum stay, be careful not to pinch the harness. Also, keep the harness away from gears.
4. When pulling out the development unit, do not hold the knob [G].

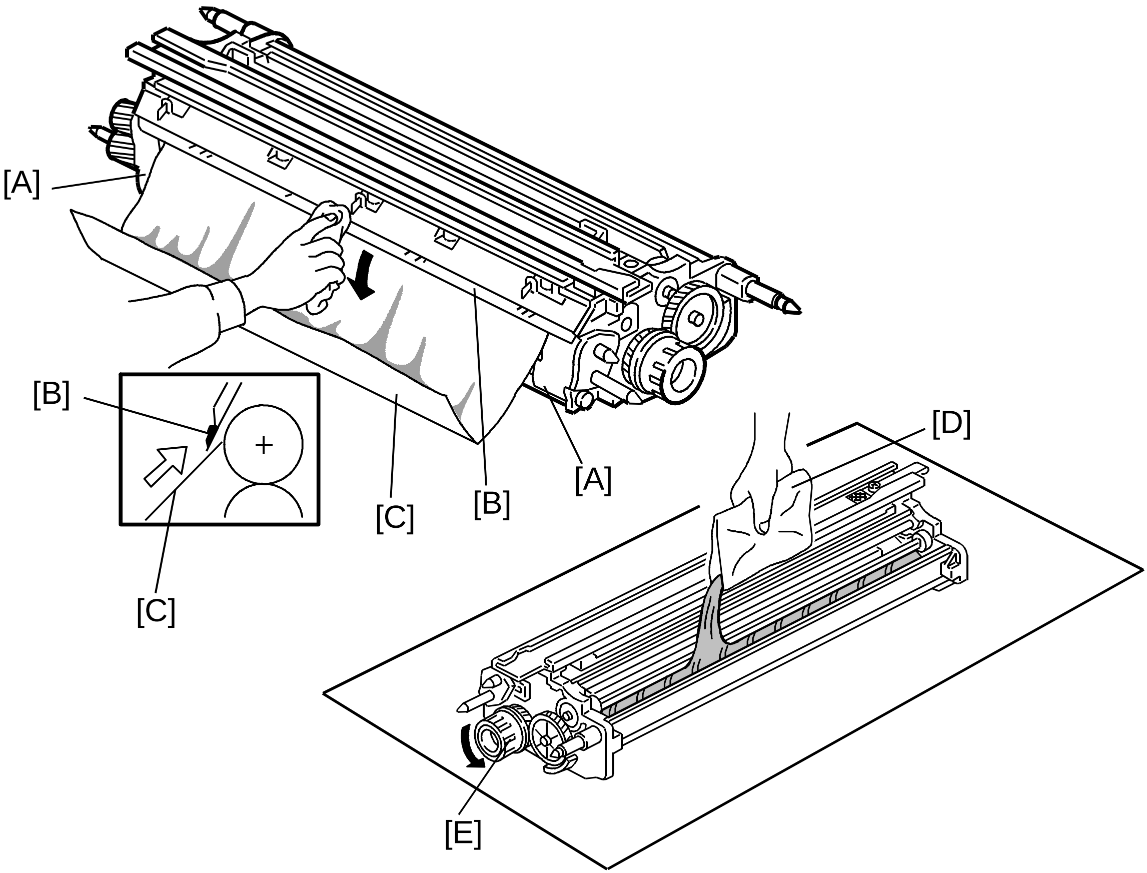
3.2 DEVELOPER REPLACEMENT



1. Take out the development unit. (Refer to Development Unit Removal.)
2. Place the development unit on the sheet [A] included with new developer.
3. Remove the two screws [B] fixing the toner hopper [C].
4. Turn the toner hopper 90 degree, then move it up to remove it from the development unit.
5. Turn over the development unit then turn the paddle roller knob [D] to empty developer onto the sheet. (The one way clutch in the knob [D] allows turning the paddle roller counterclockwise only.)

   NOTE: Dispose of used developer according to local regulations.

Make sure that no developer remains on the development rollers or in the development unit.



6. Clean the side seals [A] and entrance seal [B].

   NOTE: Cover the sleeve rollers with a sheet of paper [C] to prevent the used developer being attracted to the sleeve rollers.

7. Evenly pour in one pack of developer [D] while turning the knob [E].

8. Re-install the toner hopper, then re-assemble the machine.

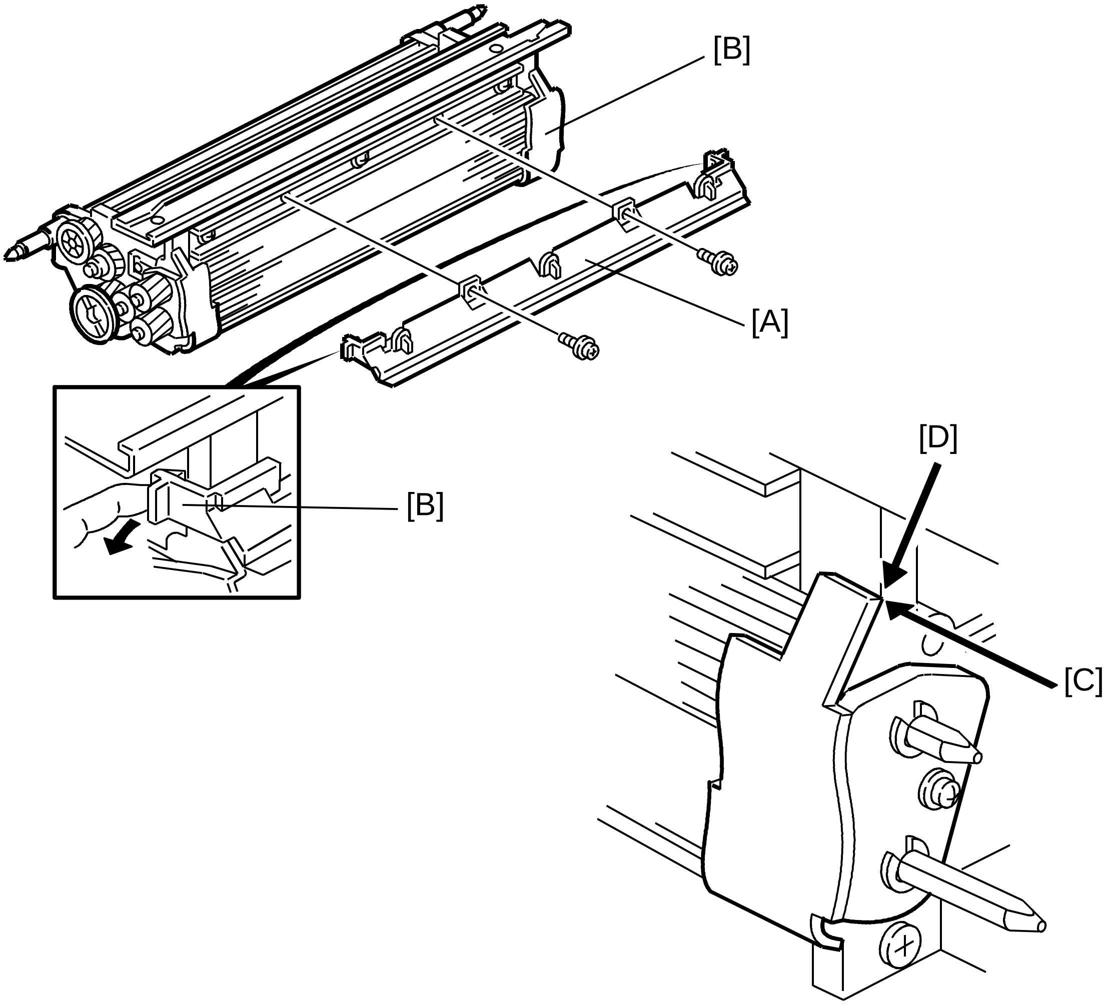
   NOTE: Be sure to set to connectors after installing the development unit in the machine.

9. Turn on the main switch, then perform developer initial setting ($\boxed{1}$ SP Adjustment – PAGE.1).

CAUTION: Never make any copy with the new developer before completing the developer initial setting, otherwise toner density control will be abnormal.

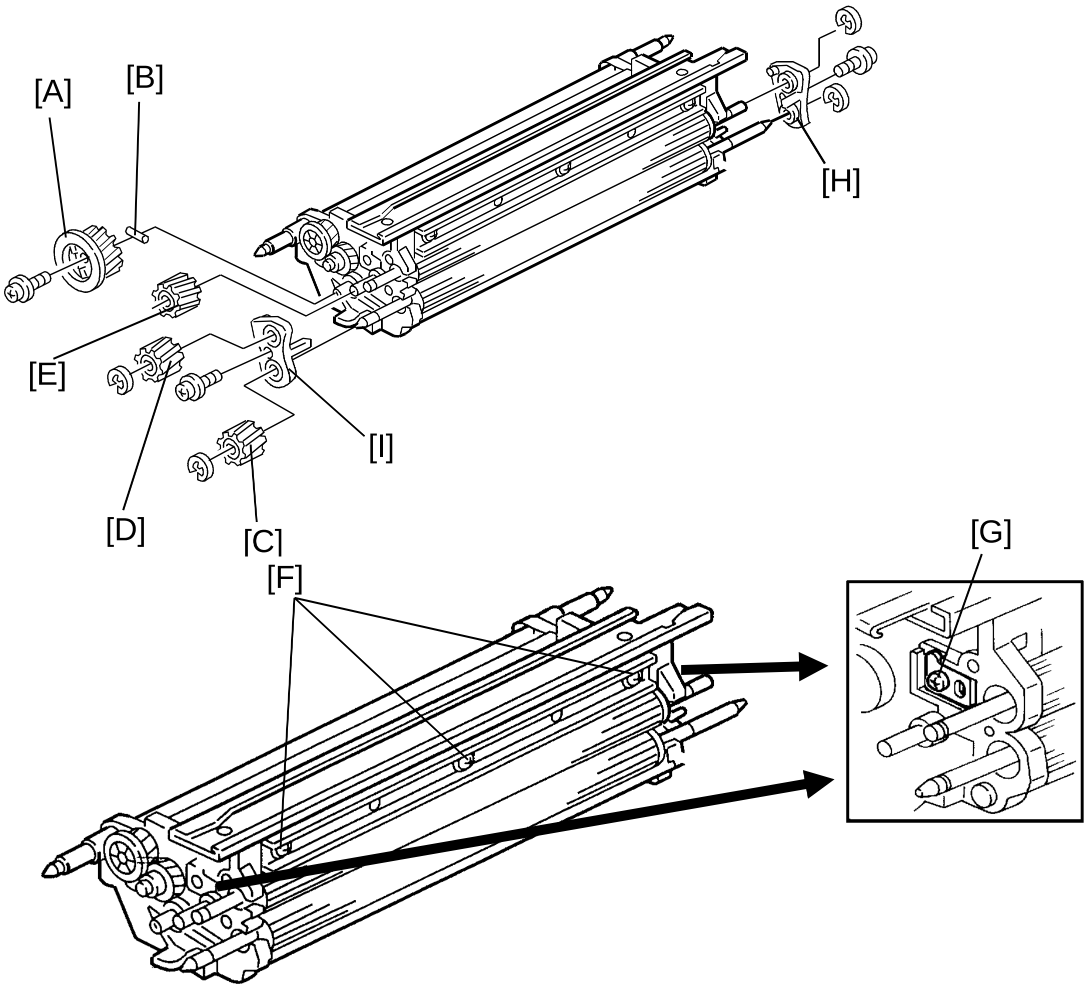
NOTE: If the developer initial setting is not completed, you cannot exit the SP mode by pressing the "Quit" key. If this occur turn the main switch off and on, then perform the initial setting again. If the result is the same, see the troubleshooting section "SC352" (Page 6-9).

3.3 DEVELOPMENT ROLLERS REPLACEMENT



1. Remove the developer. (Refer to Developer Replacement.)
2. Remove the developer entrance seal [A] (2 screws, 2 hooks).
3. Remove the front and rear side seals [B].

NOTE: When re-assembling the development unit, use new side seals and align the edge of the side seals to the corner [C] and the edge [D] as shown.



4. Remove the coupling gear [A] (1 screw).

   NOTE: Be careful not to lose the pin [B].

5. Remove the gear [C] (1 E-ring), gear [D] (1 E-ring) and gear [E].

CAUTION: Do not touch the screws at [F] and [G].
If the screws at [F] are loosened, the doctor gap will be improper.
If the screws at [G] are loosened, the photoconductor gap and magnetic field angle will be improper.
If either of them become abnormal, toner density control will be abnormal.

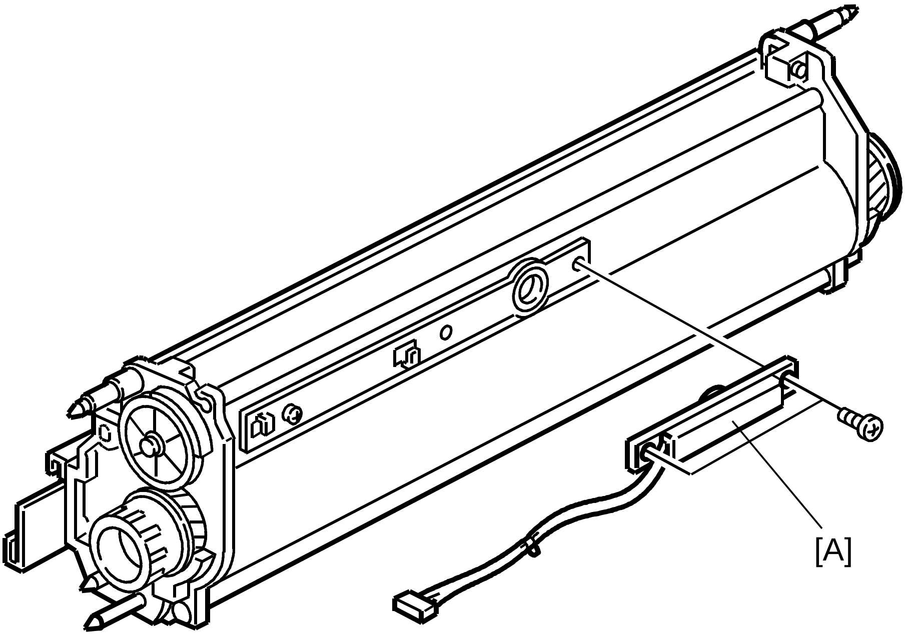
6. Remove the front roller holder [H] (1 screw and 2 E-rings) and rear roller holder [I] (1 screw).

7. Replace the sleeve rollers.
8. Re-assemble the development unit and set the developer, then re-assemble the copier.

CAUTION: If the original developer (already used) is returned to the development unit, do not perform the developer initial setting.

If the new developer is set, never make any copy before completing the developer initial setting (1 SP Adjustment – PAGE.1).

3.4 TONER DENSITY SENSOR REPLACEMENT



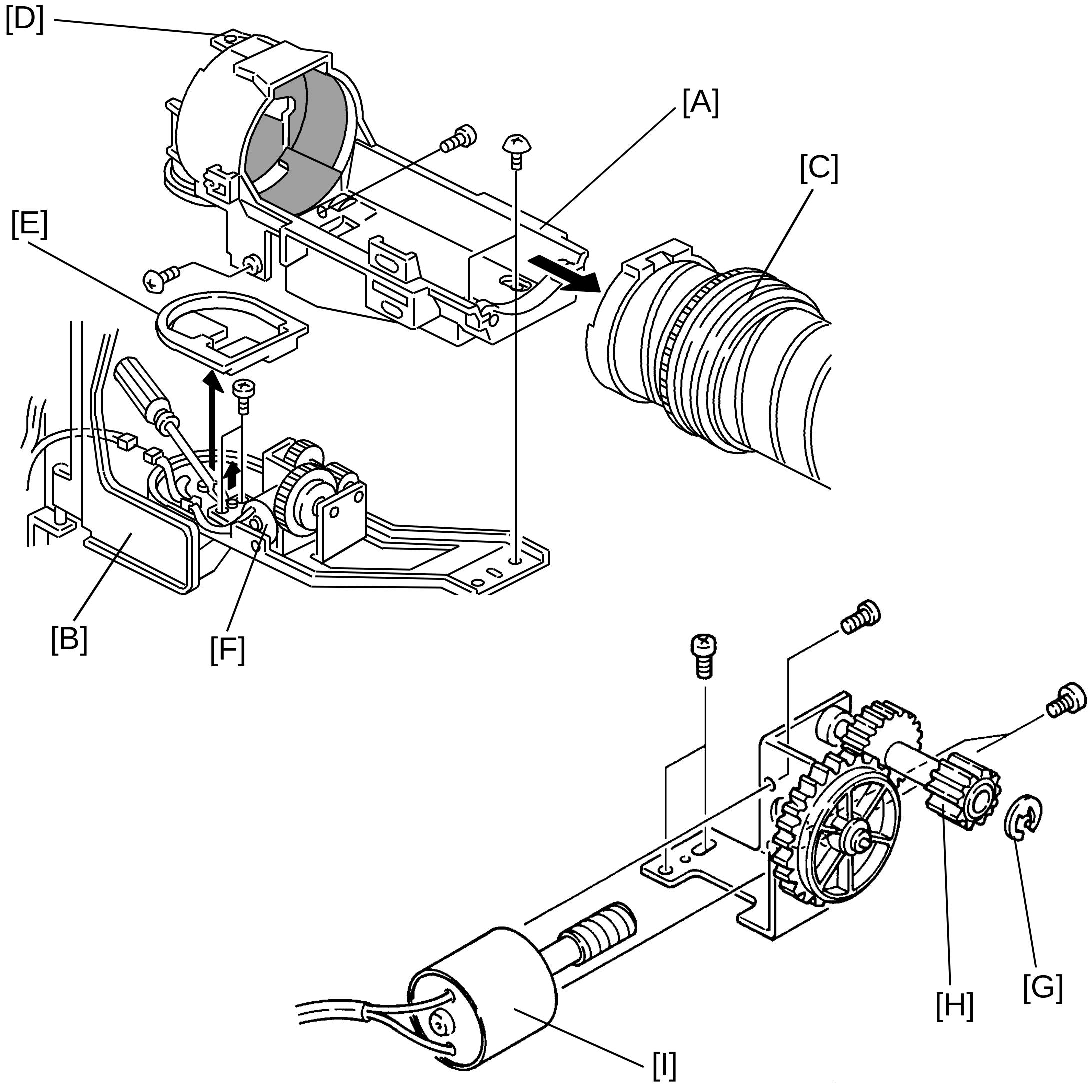
1. Remove the developer. (Refer to Developer Replacement.)
2. Replace the TD sensor [A] (2 screws).

   NOTE: Before installing the TD (Toner Density) sensor, clean the development unit well so that no carrier particle remains in the gap between the TD sensor and the development unit casing.

3. Install the new developer and perform the developer initial setting.

CAUTION: Never make any copy before completing the developer initial setting.

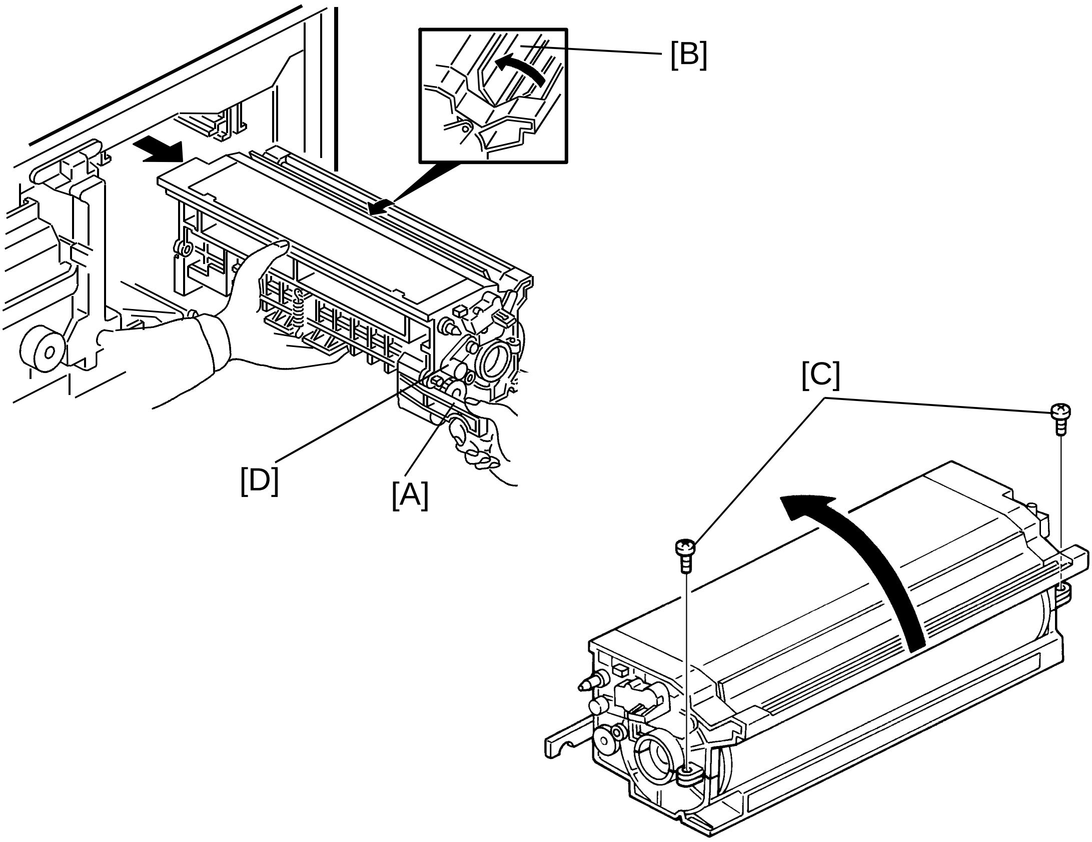
3.5 TONER BOTTLE DRIVE MOTOR REPLACEMENT



1. Open the toner bottle holder [A] with the bracket [B]. (Refer to Development Unit Removal.)
2. Remove the toner bottle [C].
3. Remove four screws then remove the toner bottle holder by unhooking the hole [D] from the pin on the hinge.
4. Remove the toner receiver [E].
5. Remove the toner bottle drive motor assembly [F] (1 connector, 2 screws).
6. Remove an E-ring [G] and slide the gear [H] to access a screw.
7. Replace the toner bottle drive motor [I] (3 screws – M3 x 4).

4. DRUM UNIT

4.1 DRUM UNIT REMOVAL AND OPC DRUM REPLACEMENT



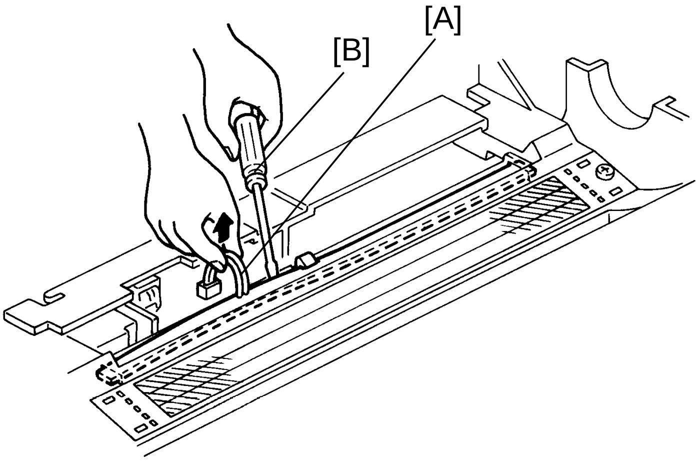
1. Take out the development unit. (Refer to Development Unit Removal.)
2. Lower the transfer belt unit.
3. Take out the drum unit by holding the knob [A].

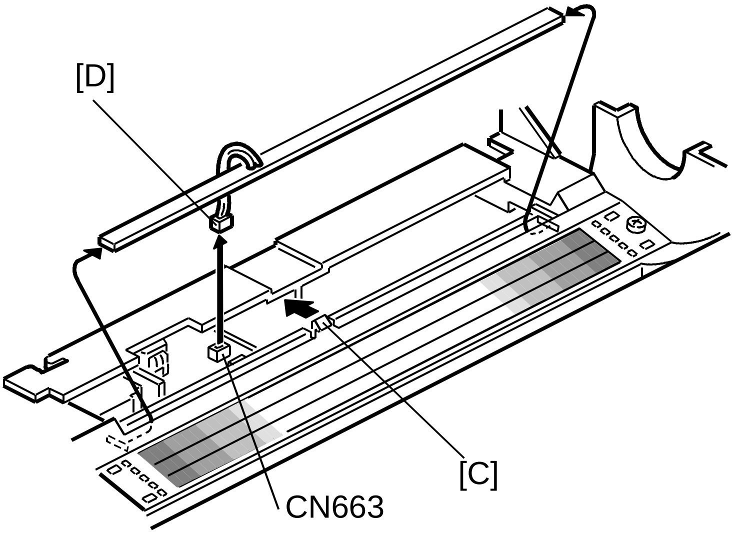
   NOTE: Close the protective shutter [B] to protect the OPC drum from light when the drum unit is left outside the machine for servicing.

4. Open the upper drum unit (2 screws [C]).
5. Replace the OPC drum. Then remove the drum protective sheet from the new drum.

   NOTE: When returning the drum unit to the copier, do not forget to open the protective shutter [B].
   If it is hard to completely set the drum unit in the machine because the gear is disengaged, then push in the drum unit while holding down the cleaning blade release knob [D].

4.2 QUENCHING LAMP REPLACEMENT





1. Remove the OPC drum. (Refer to Drum Unit Removal and OPC Drum Replacement.)

   NOTE: Wrap a protective sheet or a few sheets of paper around the drum to protect it from light.

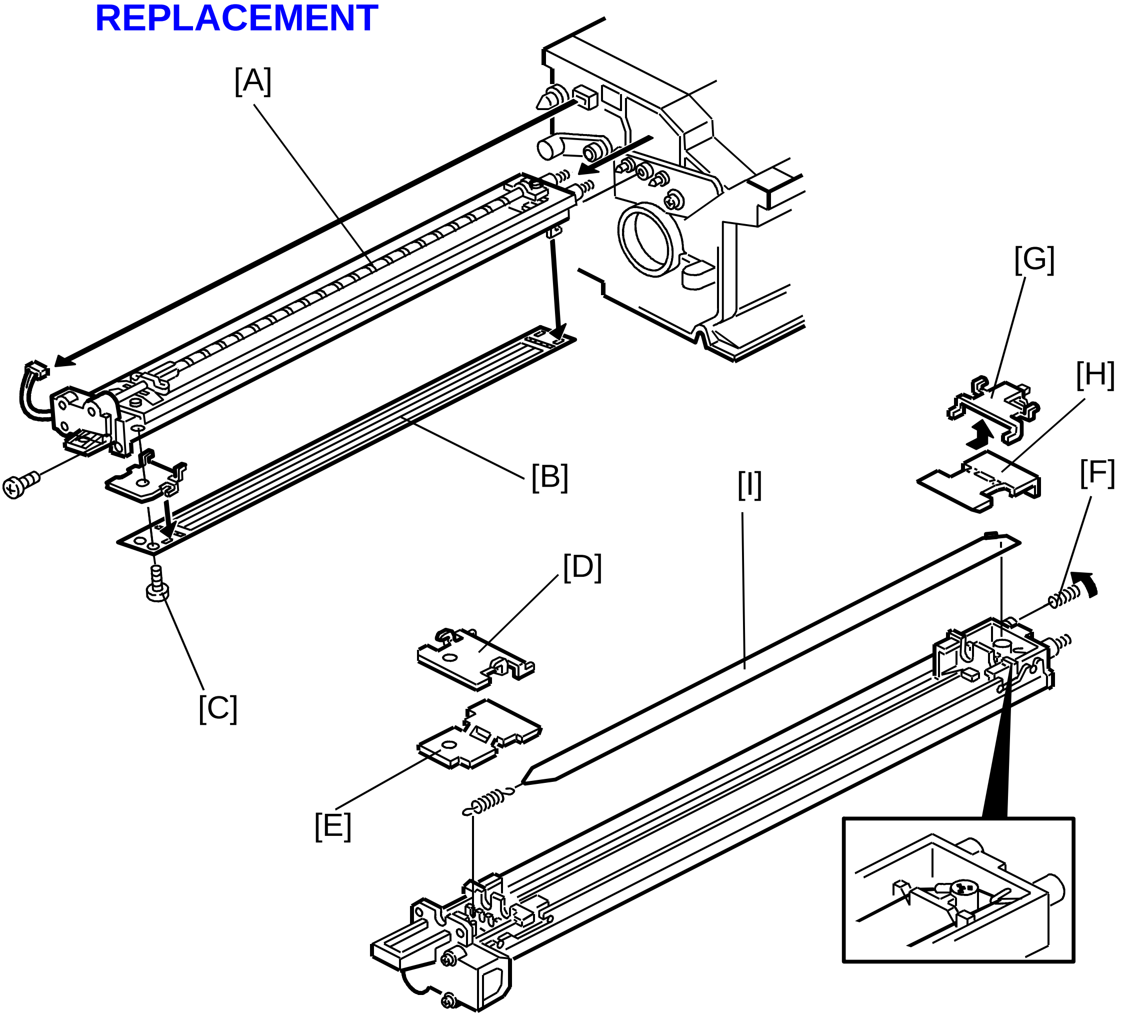
2. Slightly pull up the wires [A] on the quenching lamp, then insert the head of the small flat head screw driver [B] between the quenching lamp and the drum unit casing to release the hook [C] at the center of the quenching lamp.

   NOTE: Do not pull the wire too strongly.

3. Disconnect the connector [D].

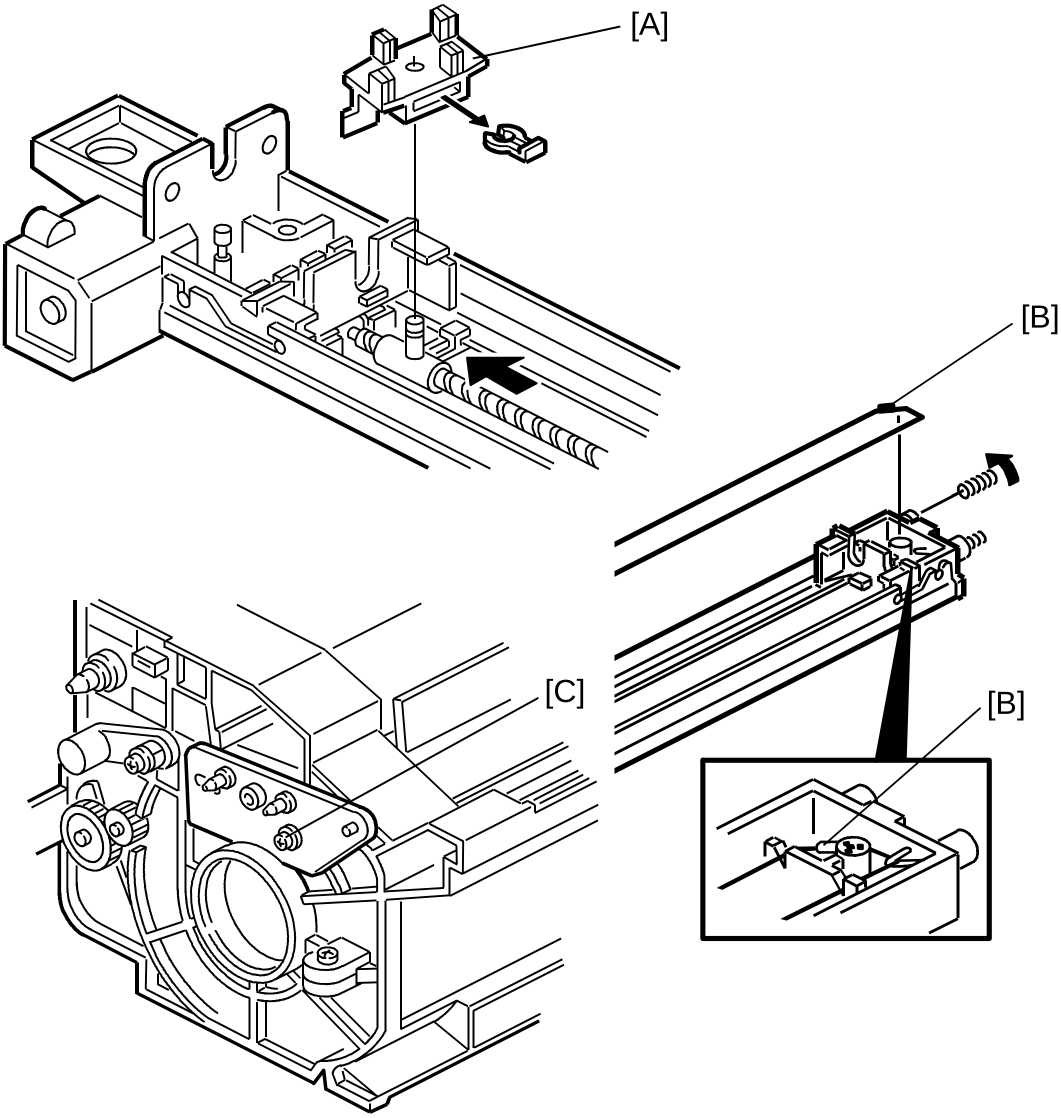
4. Replace the quenching lamp.

4.3 GRID PLATE / CHARGE WIRE / WIRE CLEANER REPLACEMENT



1. Take out the main charge corona [A] (1 screw, 1 connector).
2. Remove the grid plate [B] (1 plastic screw, 4 hooks).

   NOTE: When installing the grid plate, do not tighten the plastic screw [C] too strongly.
3. Remove the front grid terminal [D], then the front end block cover [E].
4. Remove the terminal spring [F].
5. Slide the rear grid terminal [G] to the rear and remove it, then remove the rear end block cover [H].
6. Remove the charge corona wire [I].

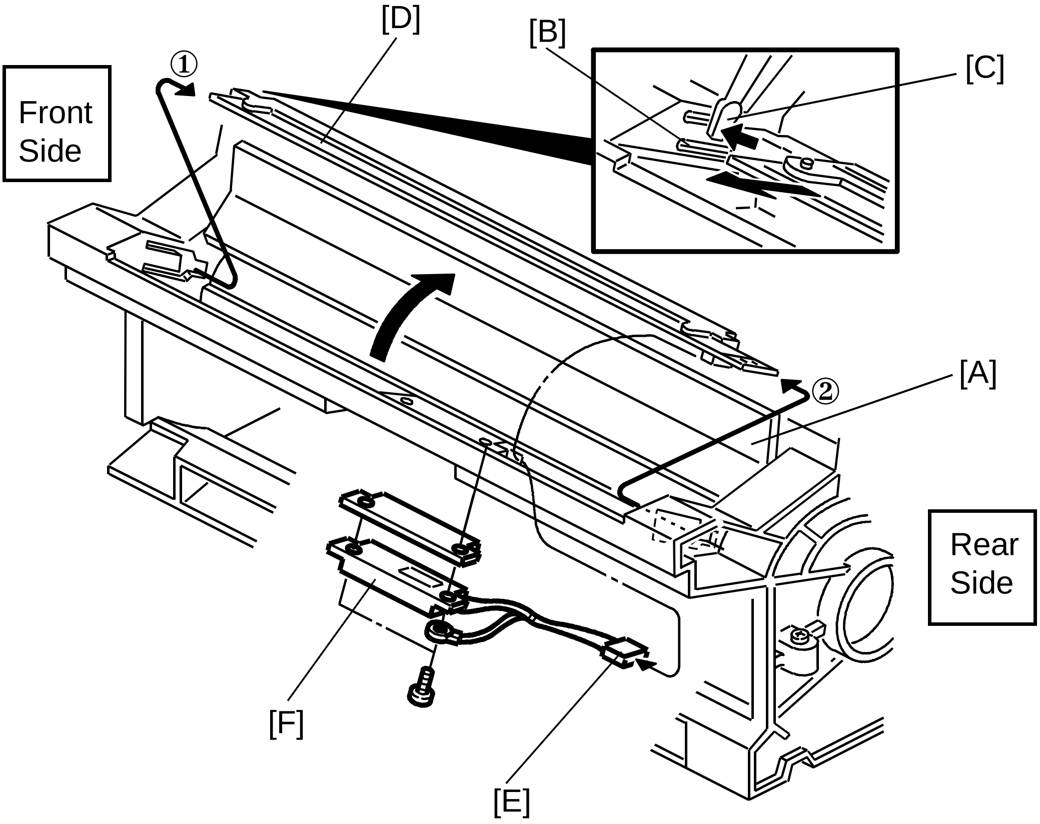


7. Remove the wire cleaner [A] (1 snap ring).

8. Install the wire cleaner and the charge corona wire.

NOTE: Locate the joint part [B] of the wire in the rear end block as shown.
Correctly set the wire between the wire cleaner pads.
Do not loosen the screw [C], otherwise the charge corona height will change.

4.4 ERASE LAMP AND DRUM POTENTIAL SENSOR REPLACEMENT

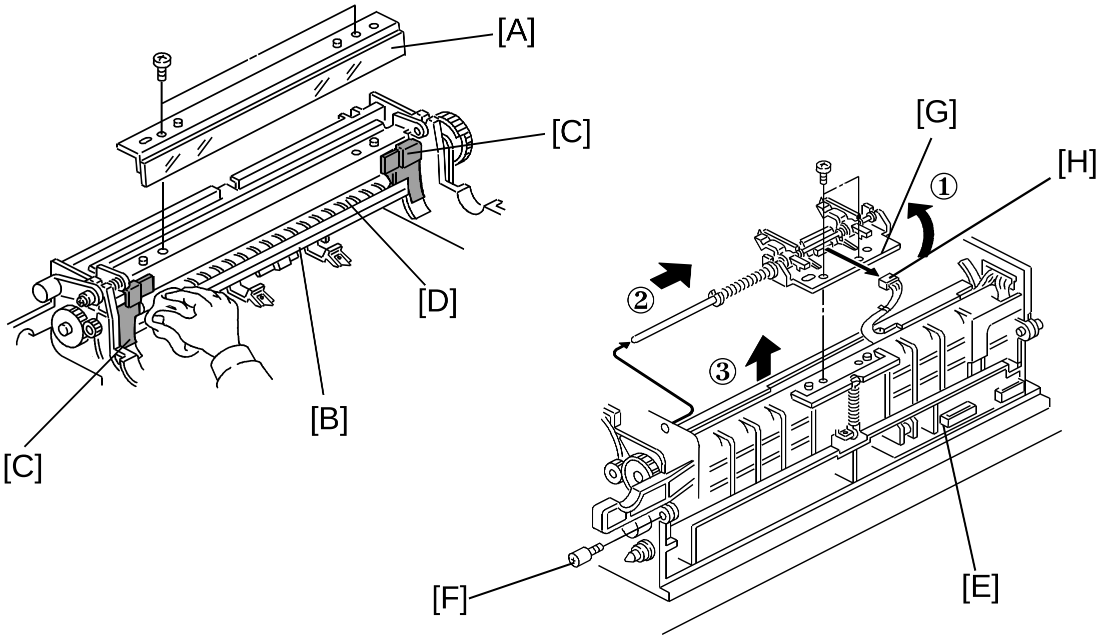


1. Open the drum shutter [A].
2. While pushing the hook [B] to the front by using a small flat head screw driver [C], move up the front side of the erase lamp [D] as shown.
3. Slide the erase lamp to the front to release the rear side of the erase lamp from the drum unit casing.
4. Disconnect the connector [E].

   NOTE: Before removing the drum potential sensor, set a few sheets of paper between the sensor and the OPC drum to protect the drum surface.
5. Replace the drum potential sensor [F].

CAUTION: After replacing the drum potential sensor, perform the process control data initial setting. (1 SP Adjustment – PAGE.1)

4.5 CLEANING BLADE REPLACEMENT



1. Remove the OPC drum. (Refer to Drum Unit Removal and OPC Drum Replacement.)
2. Remove the cleaning blade [A] (2 screws).
3. Clean the entrance seal [B], side seals [C] and cleaning brush [D].

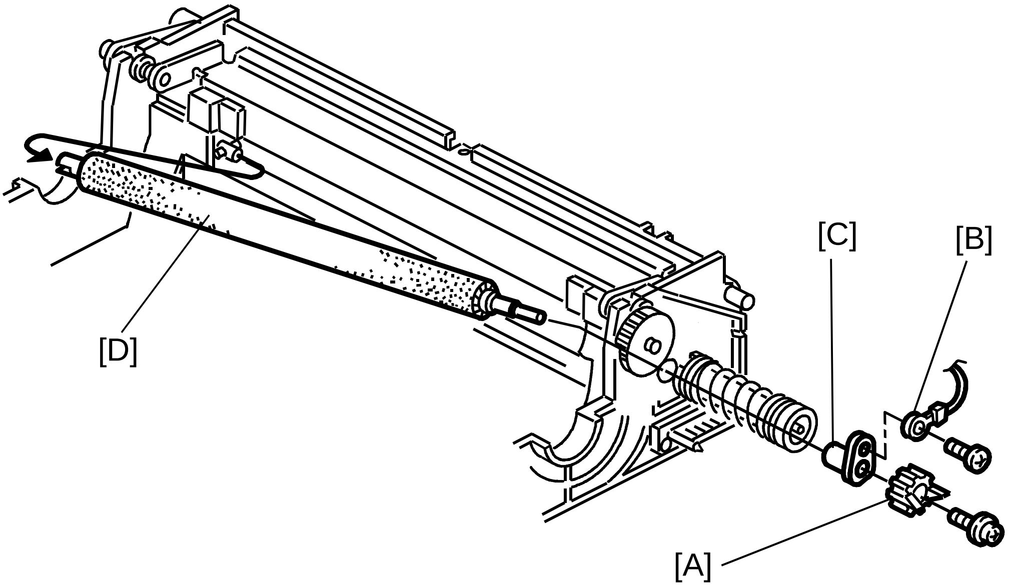
   NOTE: When a vacuum cleaner is used, to protect the electrical parts from static electricity, disconnect the connector on the charge power pack and remove the ID sensor as follows:

   1) Disconnect the 12P connector on the charge power pack [E].
   2) Remove the screw [F] and separate the upper and the lower drum units.
   3) Remove the pick-off pawl bracket [G] (2 screws).
   4) Disconnect the connector [H].
   5) While turning the bracket counterclockwise (front view), slide the pick-off pawl bracket to the rear.

4. Install the new cleaning blade.

   NOTE: Do not clean the edge of the cleaning blade with cloth, otherwise it damages the edge and causes black lines on copy images.
   Do not touch the edge of the new cleaning blade, if some setting powder or toner on the blade edge is removed, apply toner there.
   When installing the cleaning blade, do not pinch the side seals.

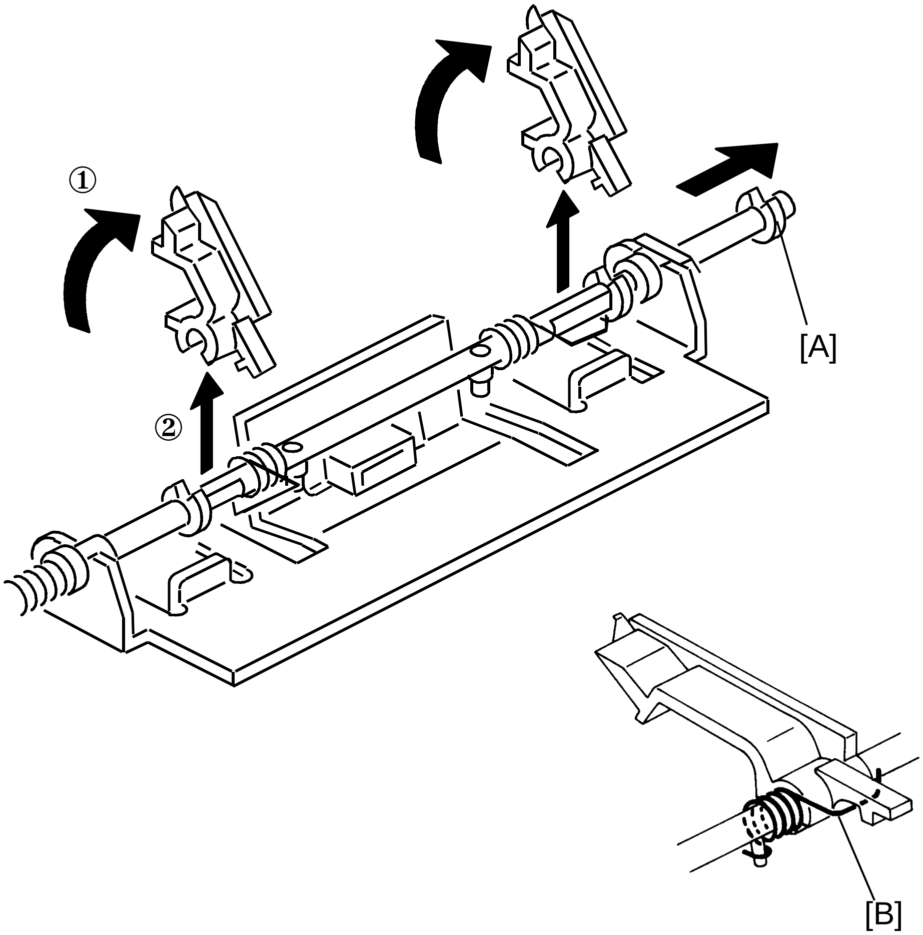
4.6 CLEANING BRUSH REPLACEMENT



1. Remove the cleaning blade. (Refer to Cleaning Blade Replacement.)
2. Remove the coupling gear [A] (1 screw).
3. Remove the grounding wire [B] (1 screw).
4. Remove the bushing [C].
5. Pull the cleaning brush shaft to the rear to release the cleaning brush [D], then remove the cleaning brush.

   NOTE: Do not touch the cleaning brush with oily hands.
   After replacement, clean the ID sensor surface.

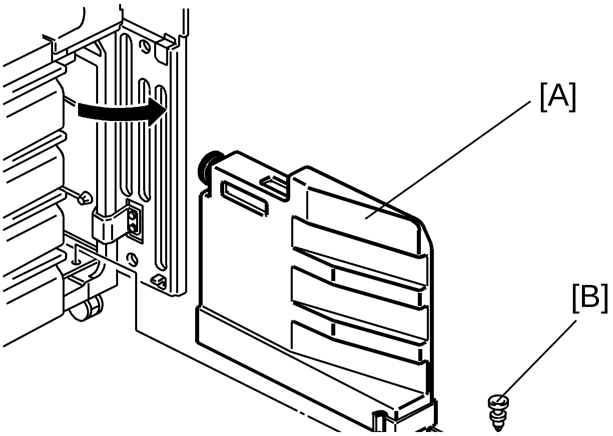
4.7 PICK-OFF PAWL REPLACEMENT

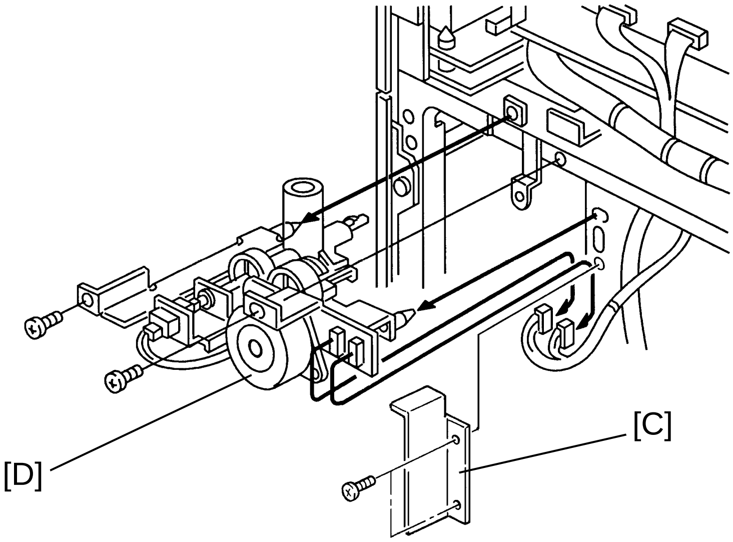


1. While pulling the shaft [A] to the rear, turn the pick-off pawl about 45 degree clockwise (front view) and move up the pick-off pawl.
2. Replace the pick-off pawl.

   NOTE: Do not forget to hook the tension spring [B].
   After replacement, check the smooth movement of the pick-off pawl.

4.8 TONER COLLECTION COIL REPLACEMENT

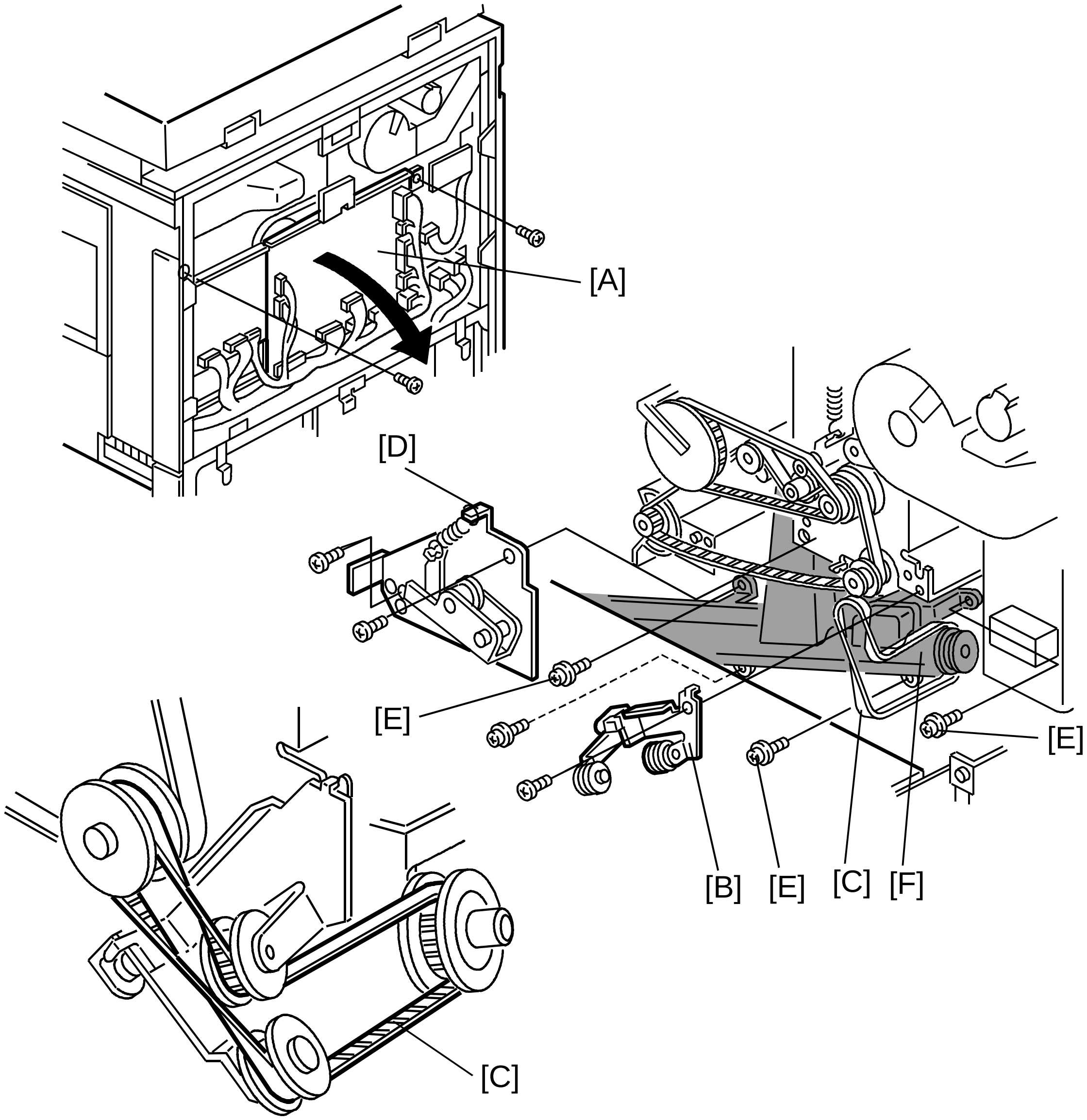




NOTE: Before starting the procedure remove the drum unit and the transfer belt unit to prevent toner from dropping in the machine.

1. Open the front doors then remove the toner collection bottle [A] (1 push-lock [B]).
2. Remove the upper and lower rear covers. (Refer to Upper and Lower Rear Covers Removal.)
3. Remove the tank cover bracket [C] (2 screws).
4. Remove the toner collection motor [D] (2 connectors, 2 screws).

   NOTE: When re-installing the toner collection motor, be sure to set the 2 positioning pins in the holes on the machine rear frame.



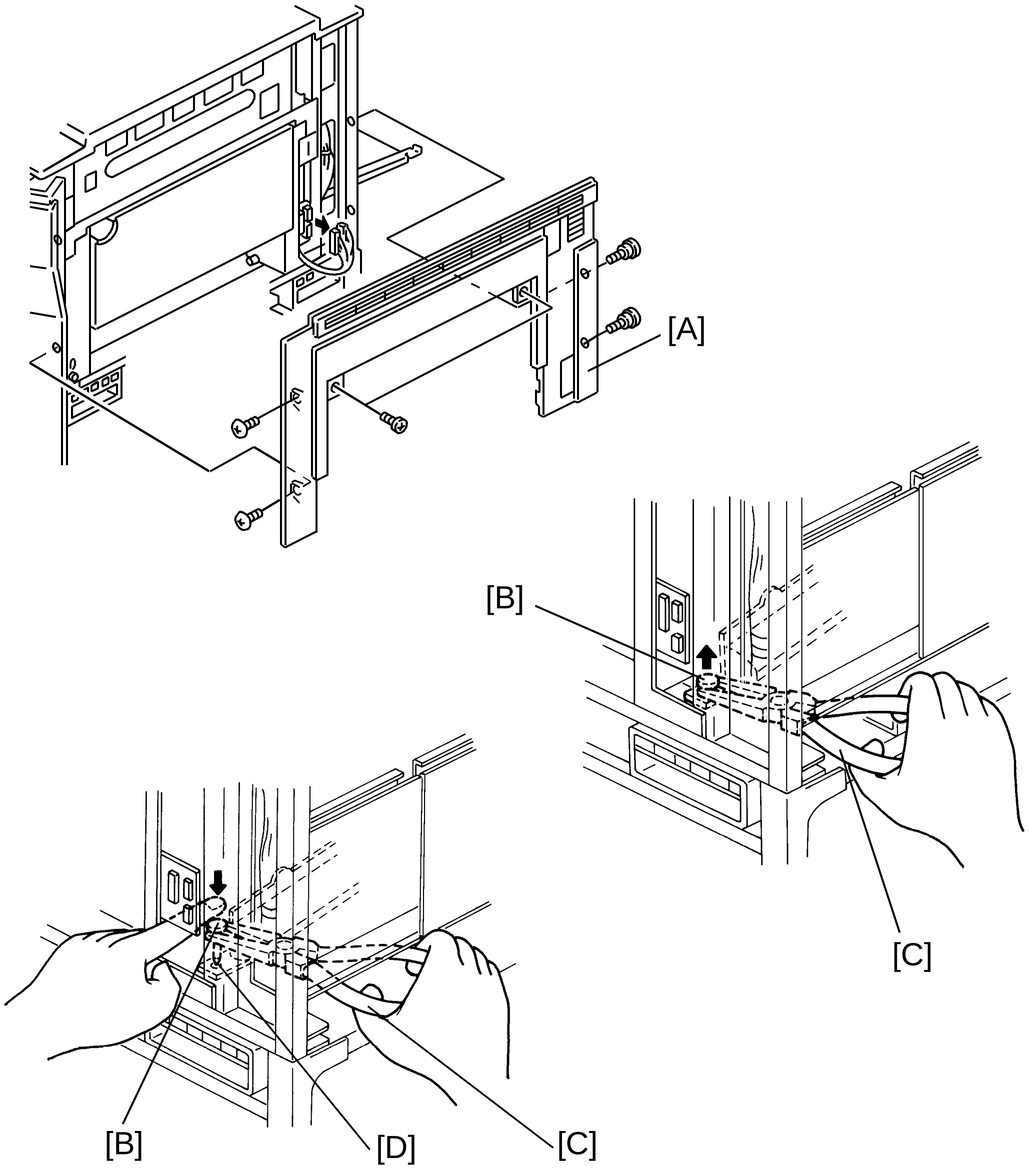
5. Open the main control board [A] (2 screws).

6. Remove the pulley bracket [B] and the timing belt [C] (1 screw).

   NOTE: When re-installing the timing belt [C], be sure that the belt is correctly hooked on the four pulleys as shown.

7. Remove the belt tightener unit [D] (2 screws).

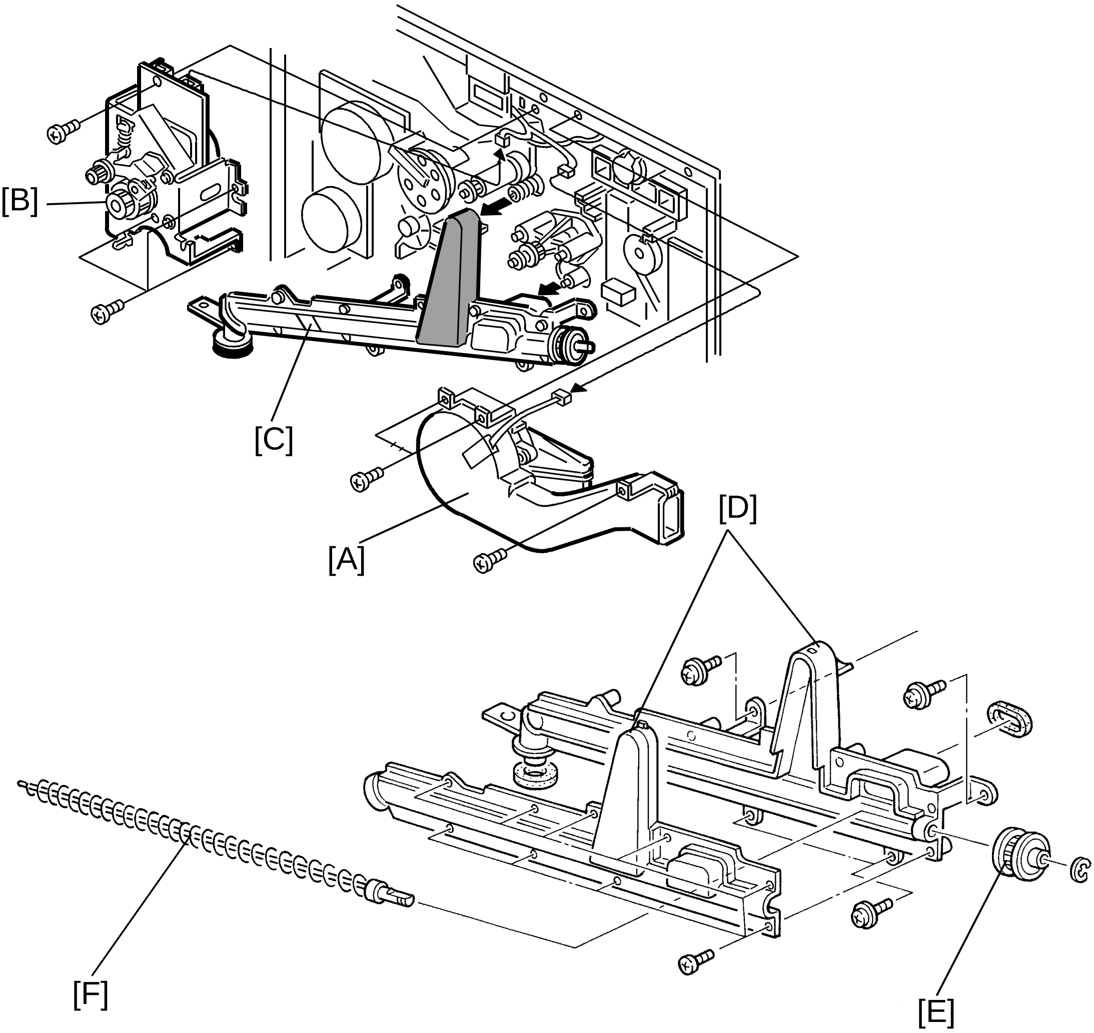
8. Remove the four screws [E] fixing the toner collection coil casing [F] to the machine rear frame.



9. Remove the upper right cover [A]. (Refer to Upper Right Cover Removal.)

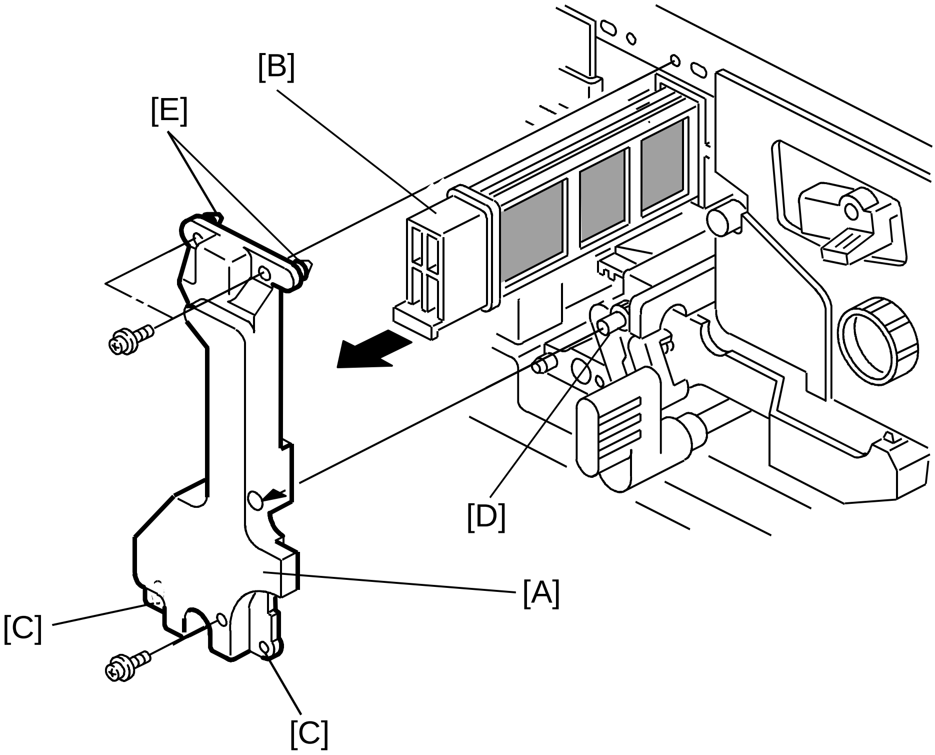
10. Remove the pin [B] of the push-lock fixing the toner collection coil casing.

NOTE: When removing the push-lock pin [B], catch the pin with needle-nose pliers [C] (accessing from the hole under the main control board, as shown).
When re-setting the push-lock pin [B], hold the pin with needle-nose pliers. Then, while holding the pin above the push-lock holder [D], push the pin head down with you finger. Insert your finger from the space below the LCT connector bracket, as shown.



11. Remove the exhaust fan [A] (1 connector, 3 screws).
12. Remove the main motor [B] (1 connector, 4 screws).
13. Remove the toner collection coil casing [C] and put it on the sheet of paper.
14. Disassemble the toner collection coil casing [D] (8 screws).
15. Remove the drive pulley [E] (1 E-ring).
16. Replace the toner collection coil [F].

4.9 OZONE FILTER REPLACEMENT

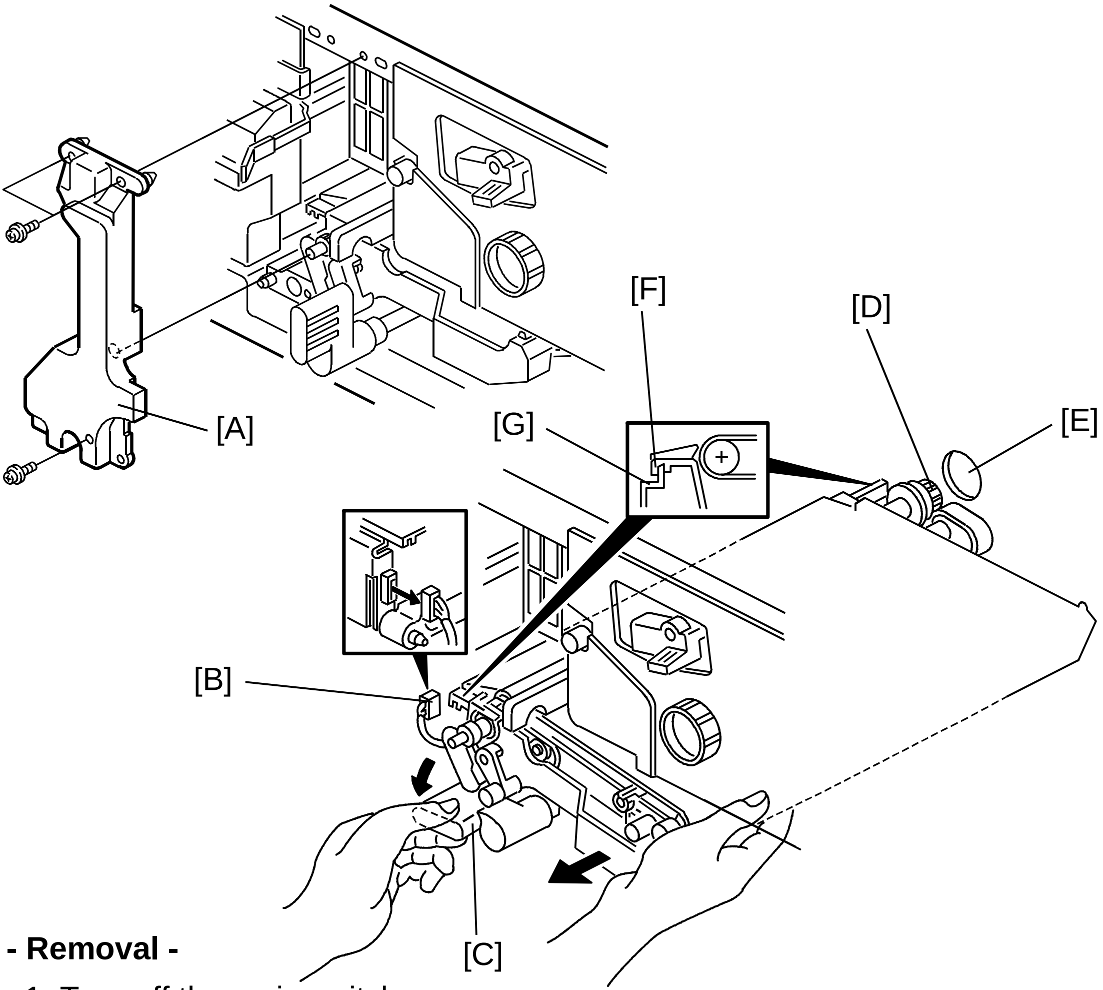


1. Open the front doors and open the toner bottle holder.
2. Remove the transfer belt unit prop [A] (3 screws).
3. Replace the ozone filter [B].

NOTE: To install the transfer belt unit prop smoothly, set in order the lower pins [C], drive roller shaft [D], and the upper pins [E].

5. TRANSFER BELT UNIT

5.1 TRANSFER BELT UNIT REMOVAL/INSTALLATION



- Removal -

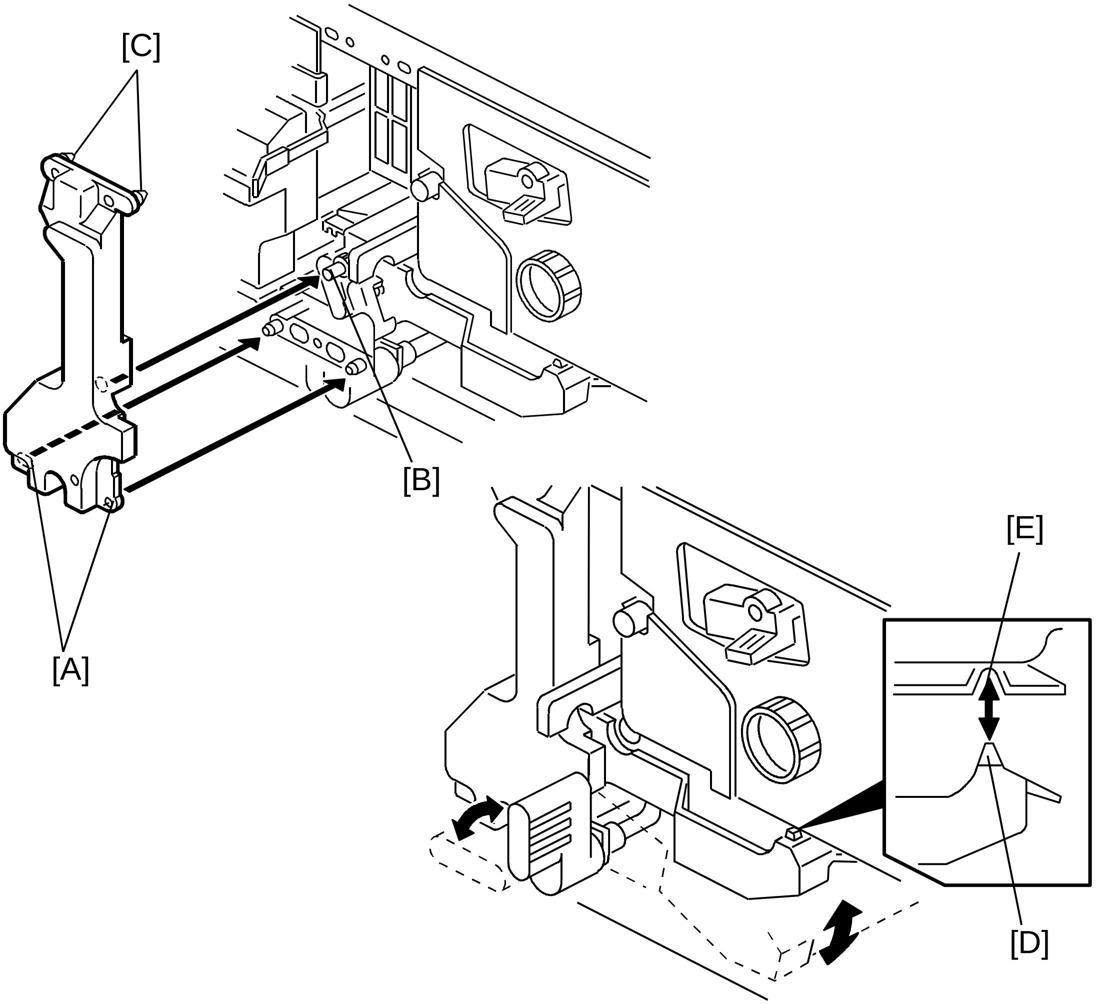
1. Turn off the main switch.
2. Remove the transfer belt unit prop [A] (3 screws).
3. Disconnect the connector [B].
4. While turning the lever [C] counterclockwise, take out the transfer belt unit.

NOTE: 1) Do not touch the transfer belt with oily hands.
2) Take care not to scratch the OPC drum with part of the transfer belt unit. Be careful when installing the transfer belt unit.

- Installation -

1. While turning the lever [C] counterclockwise, install the transfer belt unit.

NOTE: 1) Insert the gear [D] in the hole [E] on the rear frame.
2) Place the slot [F] of the transfer belt unit on the rail [G].

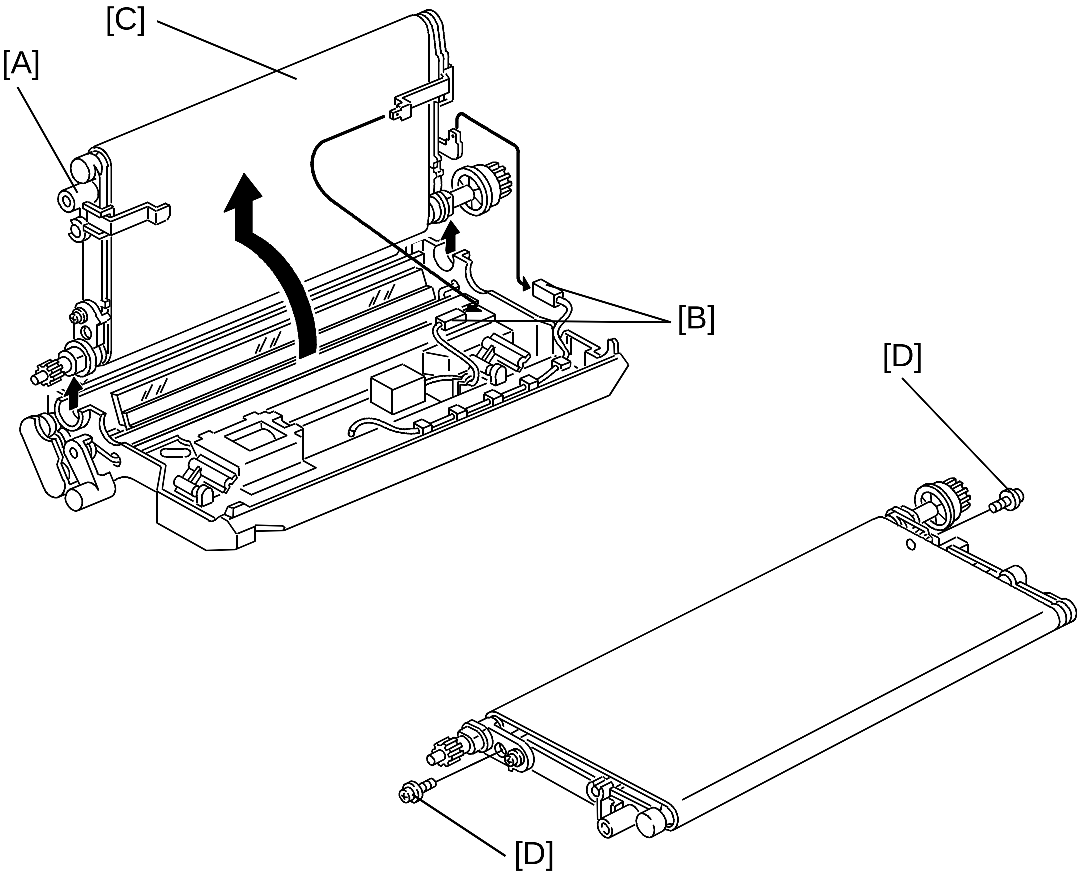


2. Install the transfer belt unit prop (3 screws).

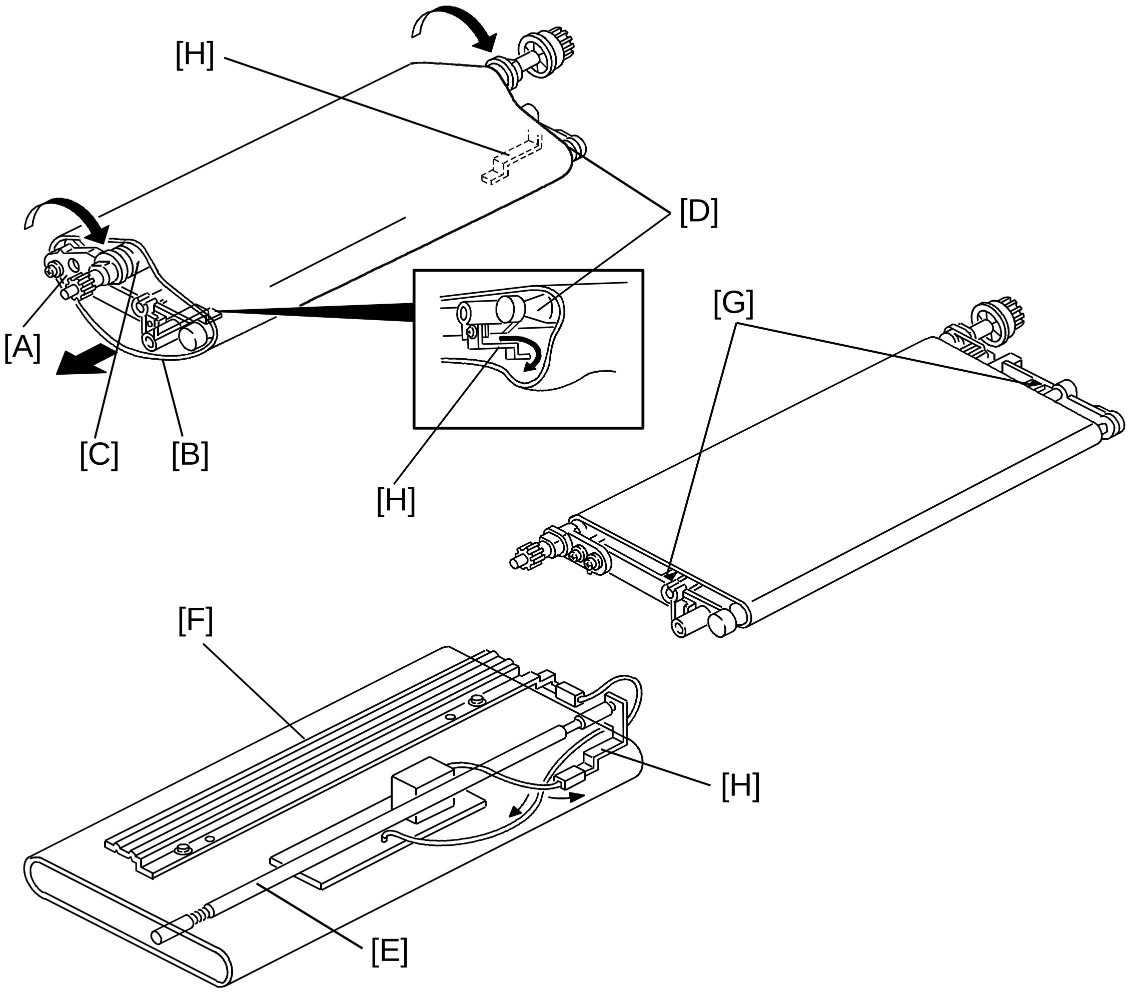
   NOTE: To install the transfer belt unit prop smoothly, set in order the lower pins [A], drive roller shaft [B], and the upper pins [C].

3. After installation, confirm the following points:
   1) Smooth up-down movement of the transfer belt unit,
   2) Part [D] of the transfer belt unit is inside the drum stay,
   3) Part [D] of the transfer belt unit is set in the dent [E] on the drum unit casing.

5.2 TRANSFER BELT REPLACEMENT



1. Take out the transfer belt unit. (Refer to Transfer Belt Unit Removal.)
2. While raising the knob [A], disconnect the two connectors [B].
3. Turn the transfer belt upper unit [C] 90 degrees counterclockwise, then raise and remove it.
4. Remove the screws [D].



5. Turn the belt drive roller holder [A] clockwise (front view).
6. Replace the transfer belt [B].

NOTE: 1) Before installing the transfer belt, clean both sides of the transfer belt with a dry cloth (do not use alcohol).

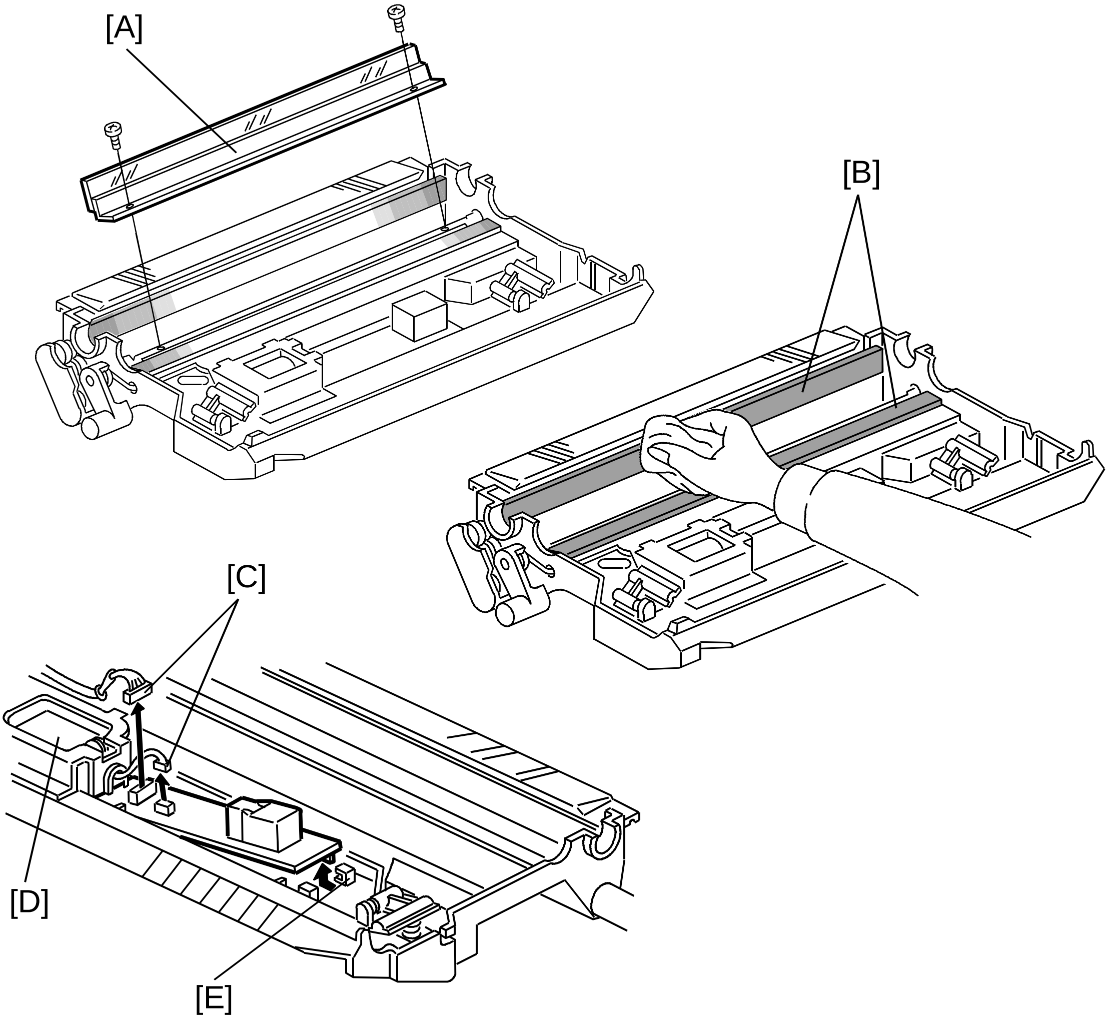
2) Before installing the transfer belt, clean the following items with alcohol.

- Belt drive roller [C]
- Belt roller [D]
- Bias roller [E]
- Discharge terminal [F]

3) Position the transfer belt at the center of the belt roller [D]. (Both marks [G] should be visible.)

4) Set the transfer belts inside the bias terminals [H].

5.3 CLEANING BLADE REPLACEMENT



1. Remove the transfer belt. (Refer to Transfer Belt Replacement.)
2. Remove the cleaning blade [A] (2 screws).
3. Clean the seals [B].

   NOTE: When using a vacuum cleaner, to protect the transfer power pack from static electricity, remove the power pack as follows:

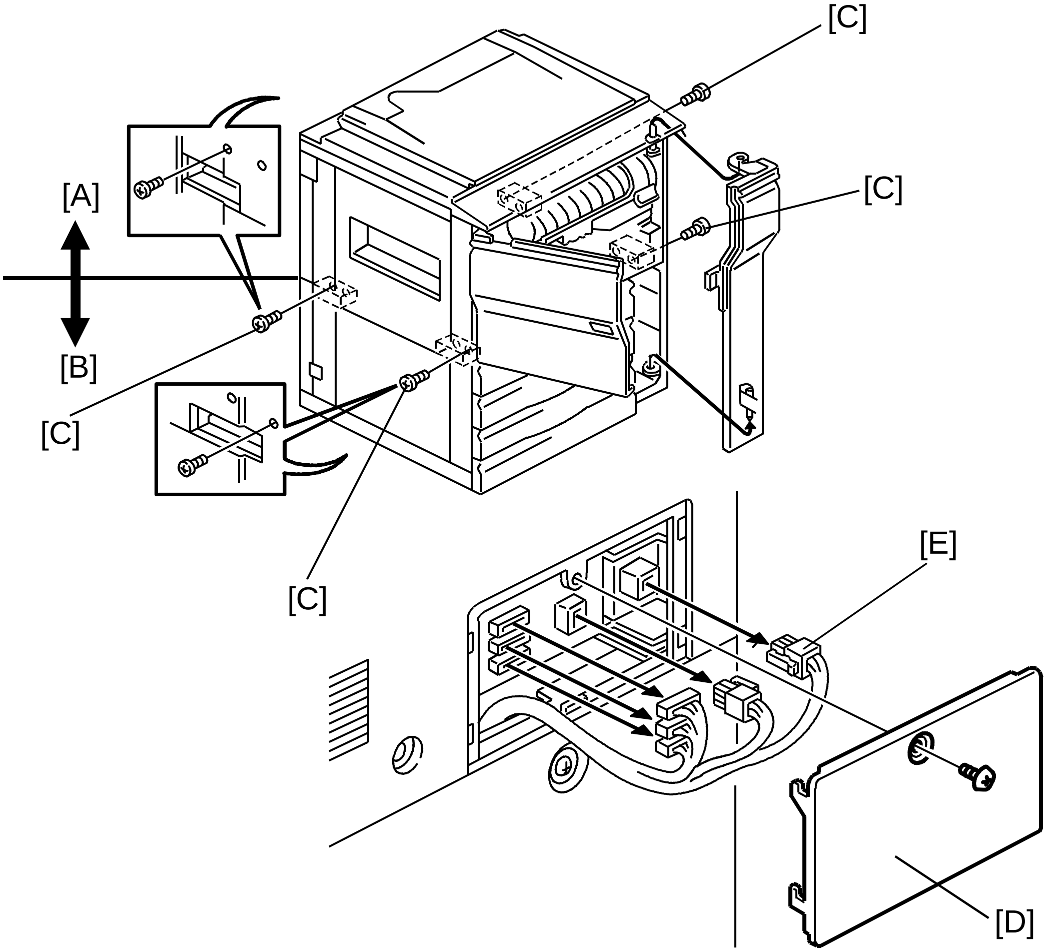
   1) Disconnect two connectors [C].
   2) While pushing the power pack toward the solenoid [D], release the power pack from the hook [E].

4. Install the new cleaning blade.

   NOTE: Do not touch the edge of the cleaning blade. If some of the setting powder on the blade edge is removed, apply setting powder or toner there.

6. PAPER FEED

6.1 PAPER TRAY UNIT REMOVAL



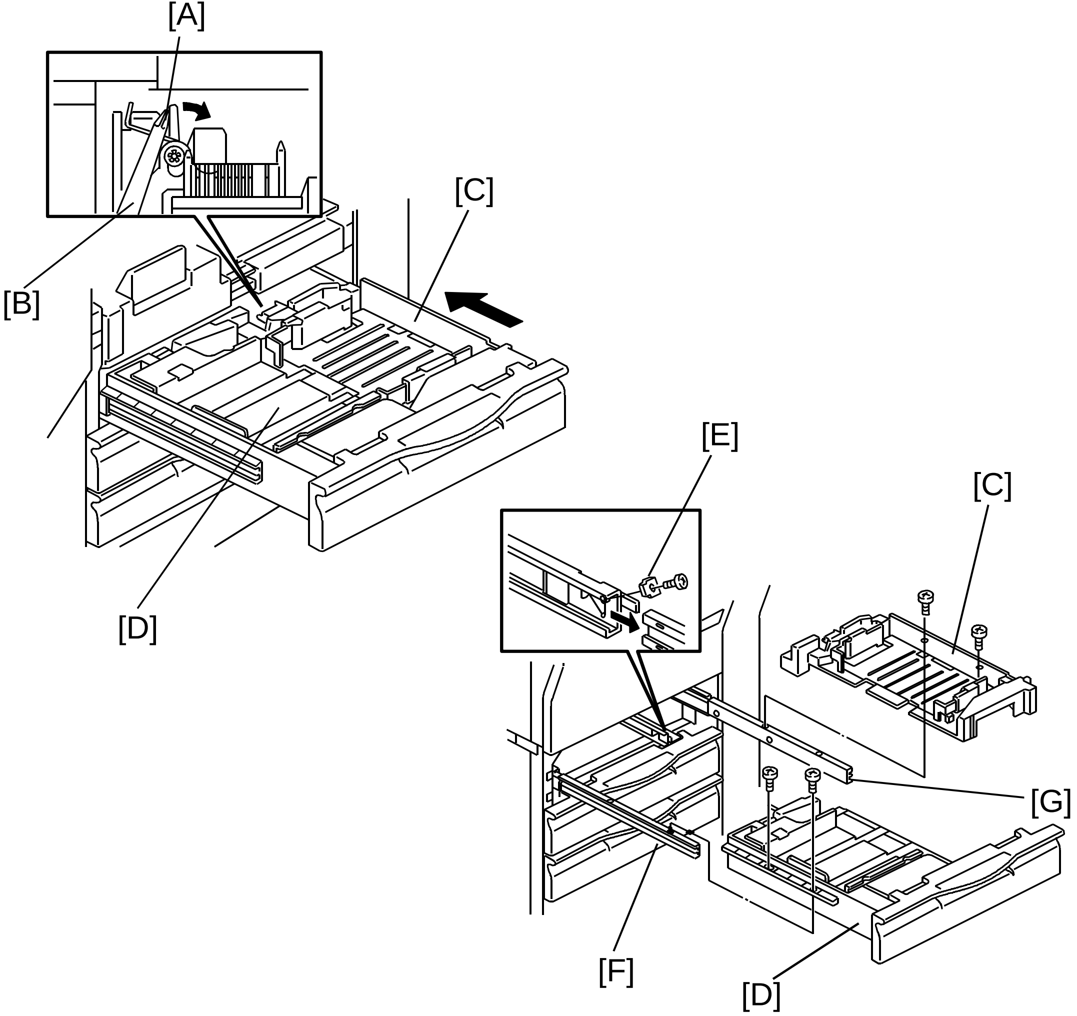
To facilitate transportation, the upper part of the copier (copier main frame) [A] and the lower part of the copier (paper tray unit) [B] can be separated as follows:

1. Turn off the main switch.
2. Remove the front covers. (Refer to Front Cover Removal.)
3. Remove the four screws [C].
4. Open the small rear cover [D] (1 screw).
5. Remove the five connectors [E].
6. Remove the copier main frame [A] from the paper tray unit [B].

   NOTE: When re-installing the copier main frame on the paper tray unit, do not pinch the harness between the copier main frame and the paper feed unit.

6.2 PAPER TRAY REMOVAL

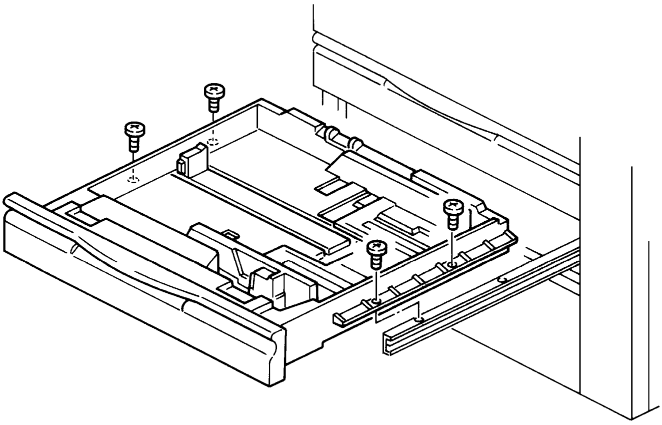
- Tandem Tray Removal (1st tray of the A096 copier) -

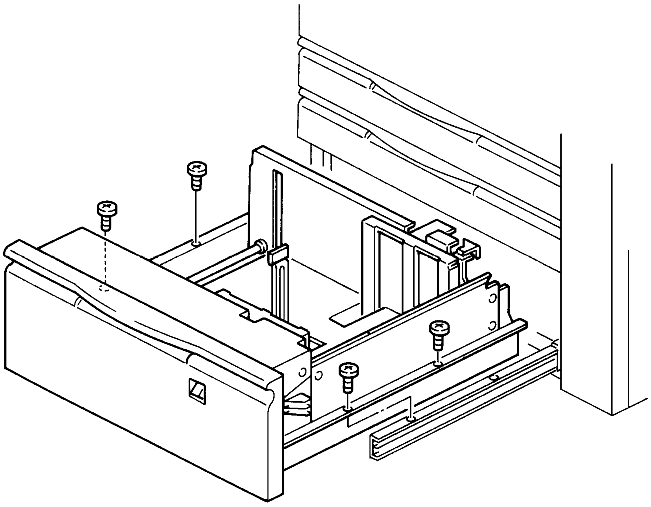


1. Open the left door and draw out the tandem tray.
2. While pushing the release lever [A] to the right with the head of the screw driver [B], slightly push the right tandem tray [C] to separate it from the left tandem tray [D].
3. Remove the stopper [E] (1 screw).
4. Remove the left tandem tray [D] from the left guide Accuride [F] (2 screws).
5. While holding the right tandem tray [C] from the bottom, remove the right tandem tray from the right guide Accuride [G] (2 screws).

   NOTE: If two screws are removed without holding the right tandem tray, it will drop.

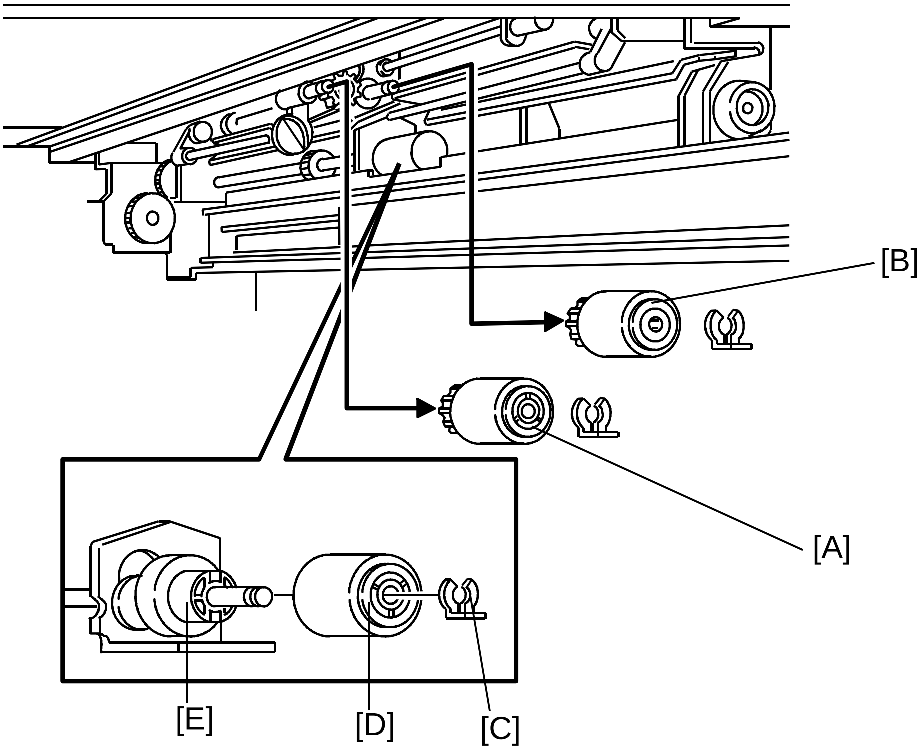
- Universal Tray / 550 sheet tray/ Built-in LCT Removal (all trays of the A095 copier / 2nd, 3rd trays of the A096 copier) -





1. Draw out the tray.
2. Remove the tray from both guide Accurides as shown (4 screws).

6.3 PAPER FEED ROLLERS REPLACEMENT

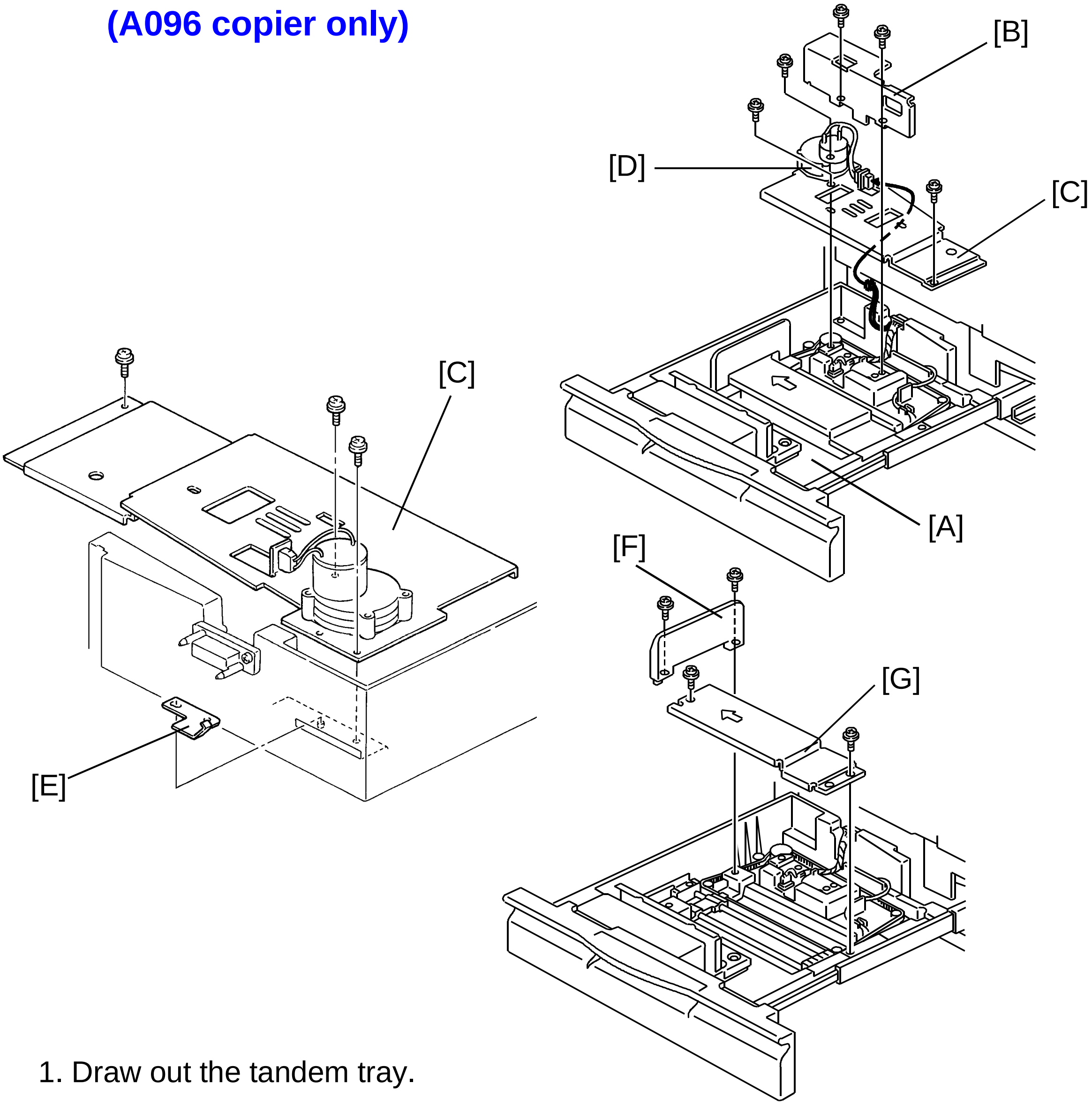


1. Turn off the main switch.
2. Remove the paper tray where the feed rollers belong to. (Refer to Paper Tray Removal.)
3. Remove the pick-up roller [A] (1 snap ring).
4. Remove the feed roller [B] (1 snap ring).
5. Remove the snap ring [C] fixing the separation roller [D] then separate the separation roller [D] from the torque limiter [E].

NOTE: 1) The paper feed (pick-up, feed, separation) rollers used in the 1st ~ 3rd feed units in the paper tray unit are different from the feed rollers used in the by-pass feed table and 3.5K LCT.

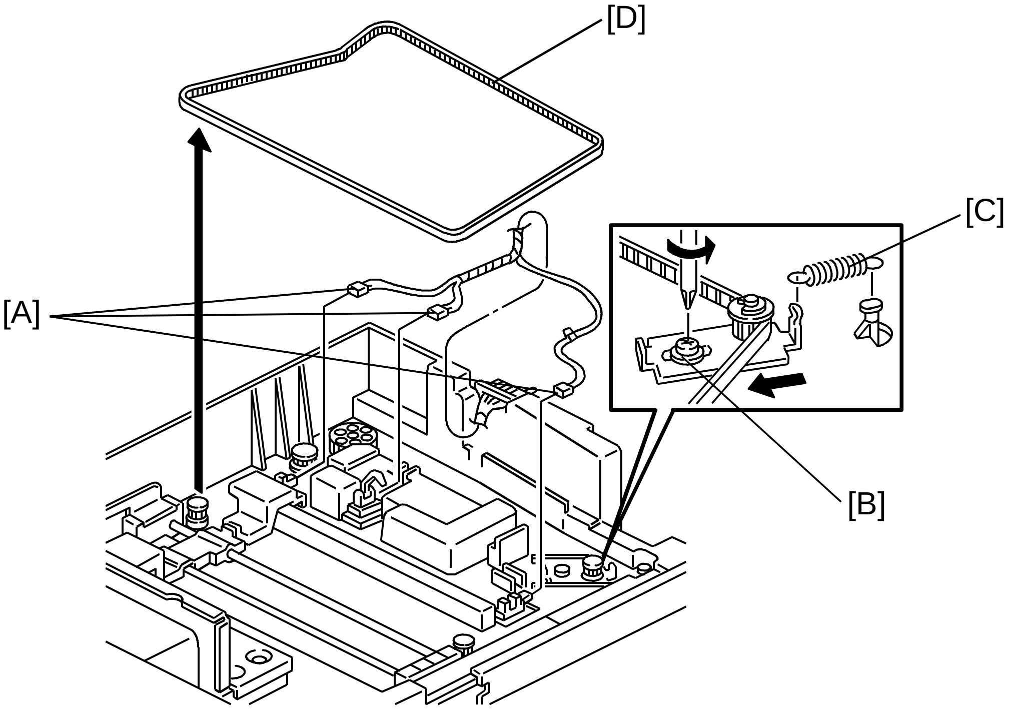
2) Do not touch the surface of the rollers with oily hand.

6.4 TANDEM REAR FENCE DRIVE BELT REMOVAL (A096 copier only)



1. Draw out the tandem tray.
2. Separate the right tandem tray from the left tandem tray [A]. (Refer to Tandem Tray Removal.)
3. Remove the rear fence [B] on the left tandem tray (2 screws).
4. Remove the rear base plate [C] with the rear fence drive motor [D] (3 screws).

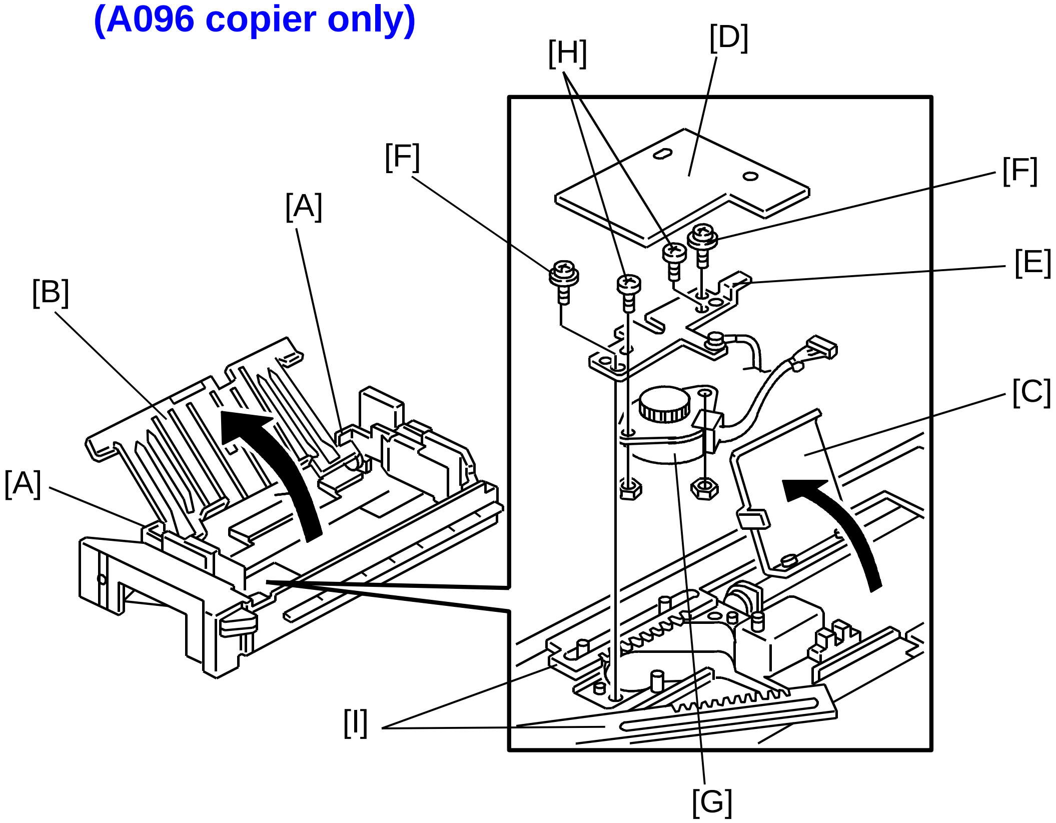
   NOTE: When re-installing the rear base plate, make sure that the grounding plate [E] is attacked to the rear base plate.
5. Remove the end fence [F] (2 screws).
6. Remove the center bottom plate [G] (2 screws).



7. Disconnect the three connectors [A].
8. Loosen the tightener screw [B] and unhook the tension spring [C].
9. Remove the timing belt [D].

NOTE: When installing the timing belt, hook the spring [C] then, tighten the screw [B].

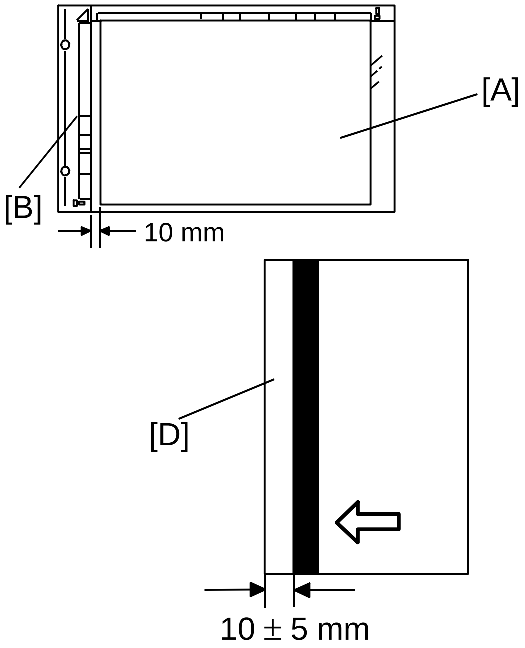
6.5 TANDEM SIDE FENCE MOTOR REMOVAL (A096 copier only)

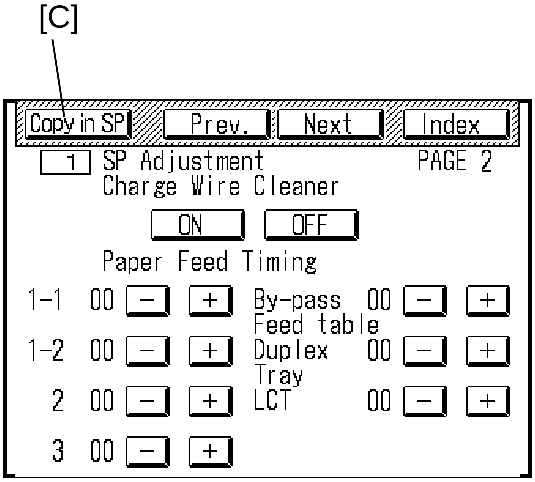


1. Open the side fences [A] and raise the bottom plate [B] of the right tandem tray.
2. Remove the lift arm [C] (2 screws).
3. Remove the cover [D] (1 screw).
4. Remove the bracket [E] (2 screws [F]).
5. Remove the side fence drive motor [G] (2 screws [H] and 2 nuts).

   NOTE: When installing the side fence drive motor, move both side fences to the innermost position, then set the motor gear between the two rack gears [I].

6.6 PAPER FEED TIMING ADJUSTMENT





1 SP Adjustment PAGE 2

Charge Wire Cleaner

Paper Feed Timing

1-1 00

1-2 00

2 00

3 00

By-pass Feed table 00

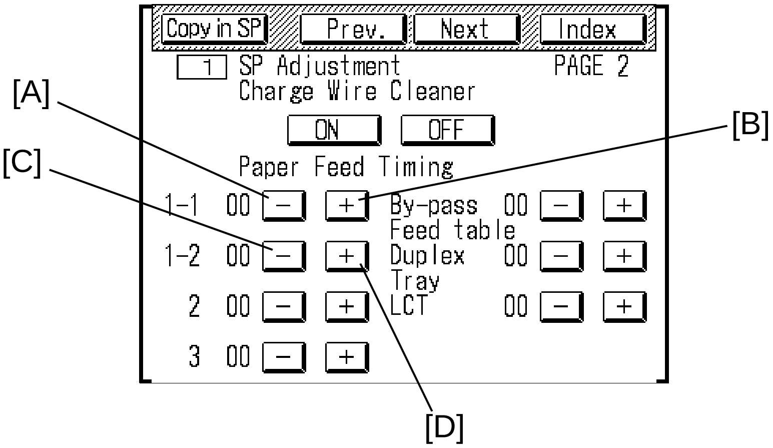
Duplex Tray 00

LCT 00

1) Paper feed timing adjustment for the 1st feed station

1. Place a white paper on the exposure glass so that there is a gap of 10 mm between the white paper [A] and the left scale [B].
2. Enter SP mode (refer to Service Program Access Procedure) and access the 1 SP Adjustment – PAGE 2.
3. Touch the **"Copy in SP"** key [C] then select the 1st feed station.
4. Enter a copy quantity of "2" using the number keys.
5. Touch the **"SP Mode"** key.
6. Press the **Start** key and evaluate the width of the white area [D] on the copy. The adjustment standard is 10 ± 5 mm.

   NOTE: In this mode, the registration roller does not stop for registration. Do not make copies in "Copy in SP" mode for this adjustment. In "Copy in SP" mode, the registration clutch stops normally.


Copy in SP
Prev.
Next
Index
1
SP Adjustment
PAGE 2
Charge Wire Cleaner
ON
OFF
Paper Feed Timing
1-1 00 − +
1-2 00 − +
2 00 − +
3 00 − +
By-pass Feed table 00 − +
Duplex Tray 00 − +
LCT 00 − +
[A]
[B]
[C]
[D]

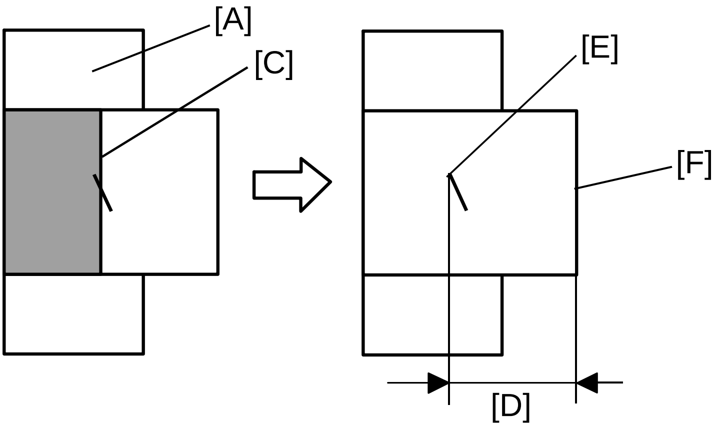
7. For the first copy, touch the – key [A] or the + key [B] to adjust the white area width.
8. For the second copy, touch the – key [C] or the + key [D] to adjust the white area width.
9. Repeat steps 6 to 8.

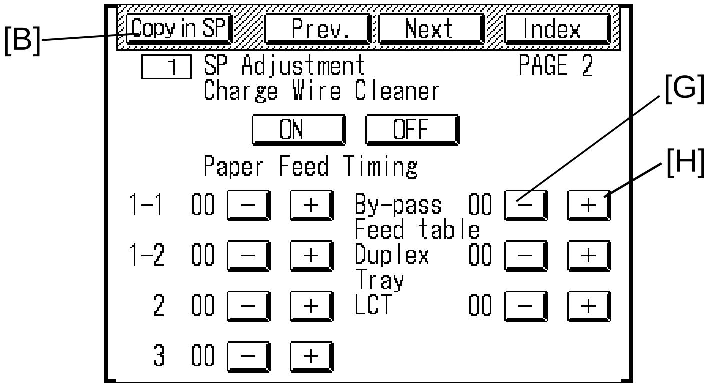
2) Paper feed timing adjustment for the 2nd, 3rd feed stations, the LCT and duplex unit.

Refer to Paper Feed Timing Adjustment for the 1st feed station.

NOTE: Concerning the adjustment for the 1st feed station, it is necessary to adjust the feed timing for the 1st and 2nd papers individually. However, for the other feed stations, it is necessary to adjust the feed timing only for the 1st paper fed.

Therefore, you can skip steps 4 and 7 of the paper feed timing adjustment for the 1st feed station.





1 SP Adjustment PAGE 2
Charge Wire Cleaner

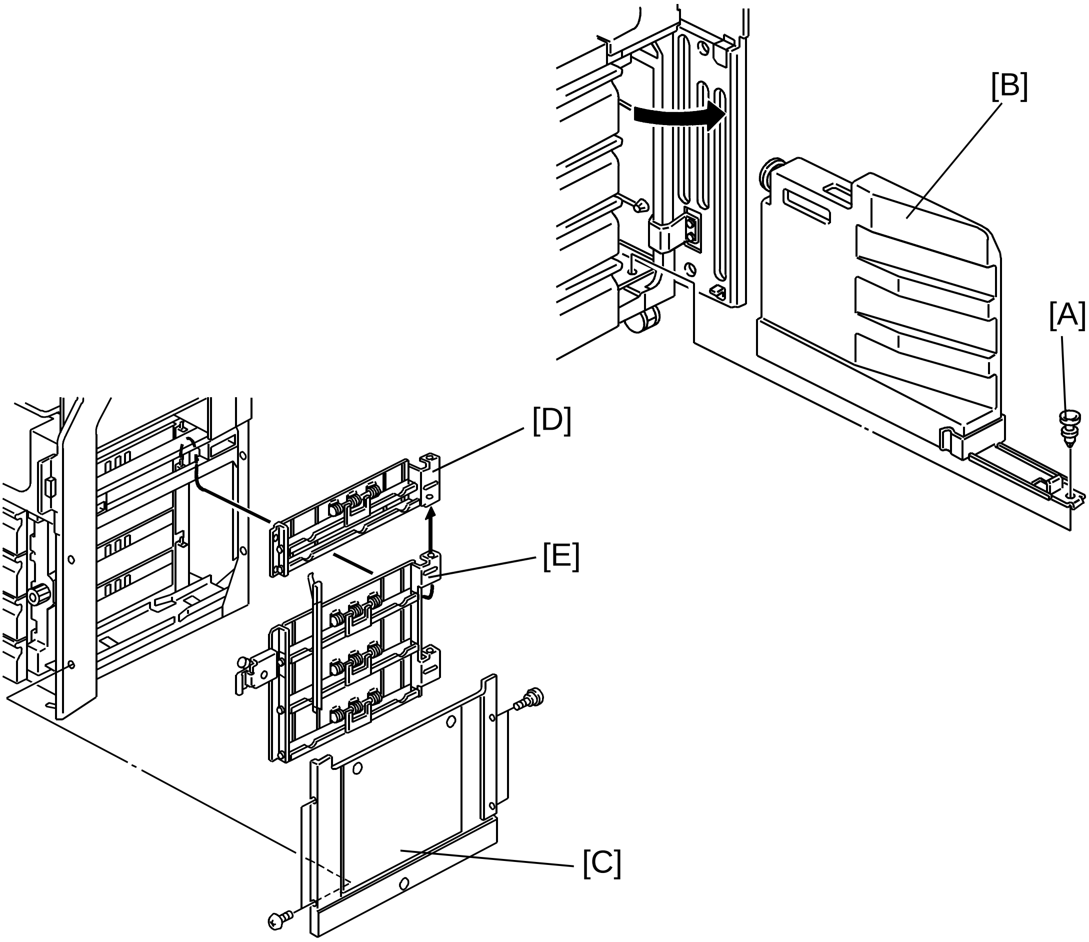
Paper Feed Timing

1-1 00 By-pass Feed table 00
1-2 00 Duplex Tray 00
2 00 LCT 00
3 00

3) Paper feed timing adjustment for the by-pass feed station

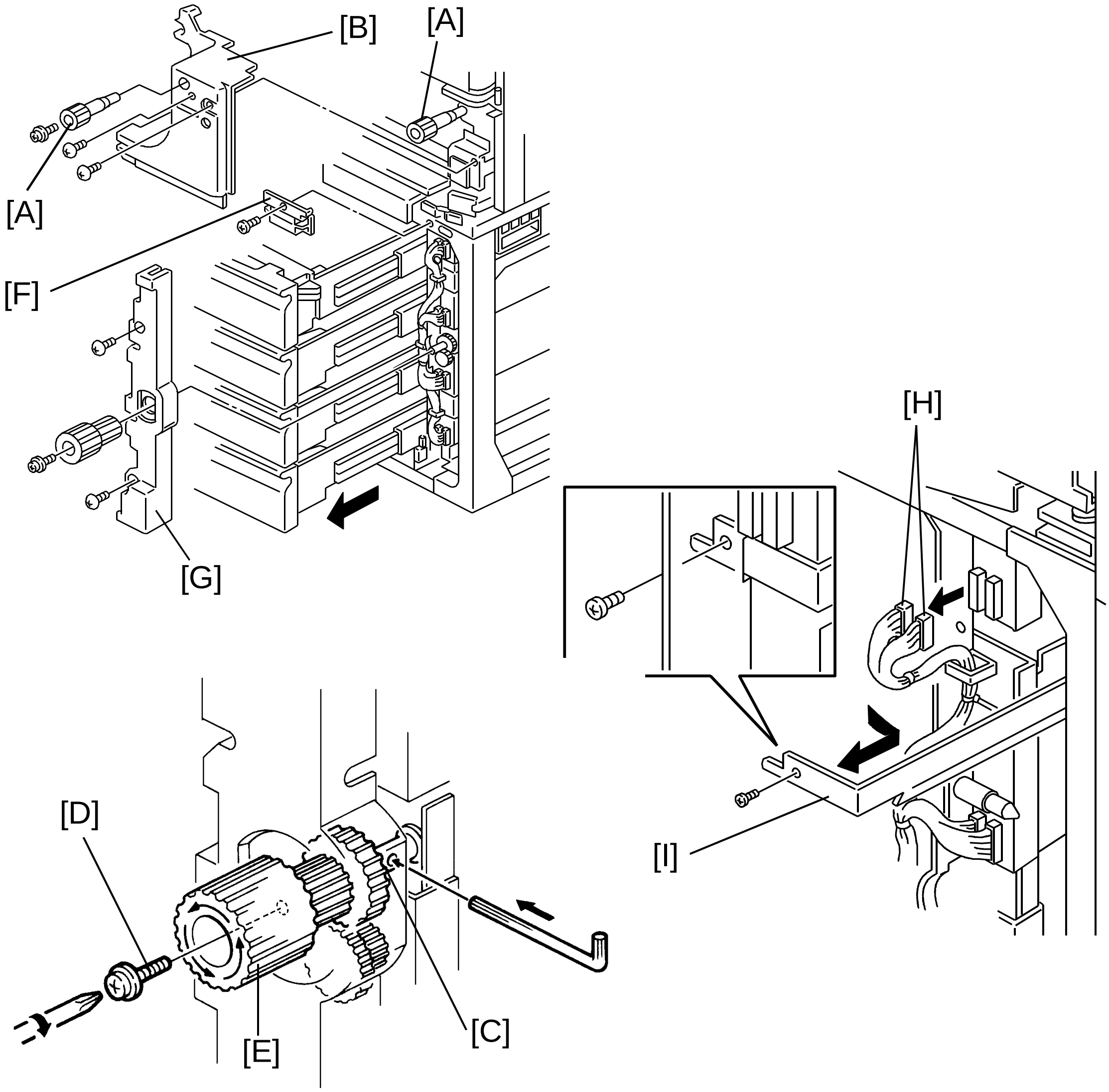
1. Set two sheets of paper on the by-pass feed table [A].
2. Enter SP mode (refer to Service Program Access Procedure) and access $\boxed{1}$ SP Adjustment – PAGE 2.
3. Touch the **"Copy in SP"** key [B].
4. Select the by-pass feed station.
5. Press the **start** key then when the paper stops for registration, mark the trailing edge [C] of the paper on the next paper as shown.
6. Measure the distance [D] between the leading edge of the mark [E] and the trailing edge of the paper [F] as shown. The adjustment standard is 106 ~ 115 mm.
7. Touch the **"SP Mode"** key.
8. Touch the – key [G] or the + key [H] to adjust the distance [D].
9. Touch the **"Copy in SP"** [B].
10. Repeat steps 5 to 9.

6.7 PAPER FEED CLUTCH REMOVAL



1. Turn off the main switch then open the right front door and remove the push-lock [A].
2. Remove the toner collection bottle [B].

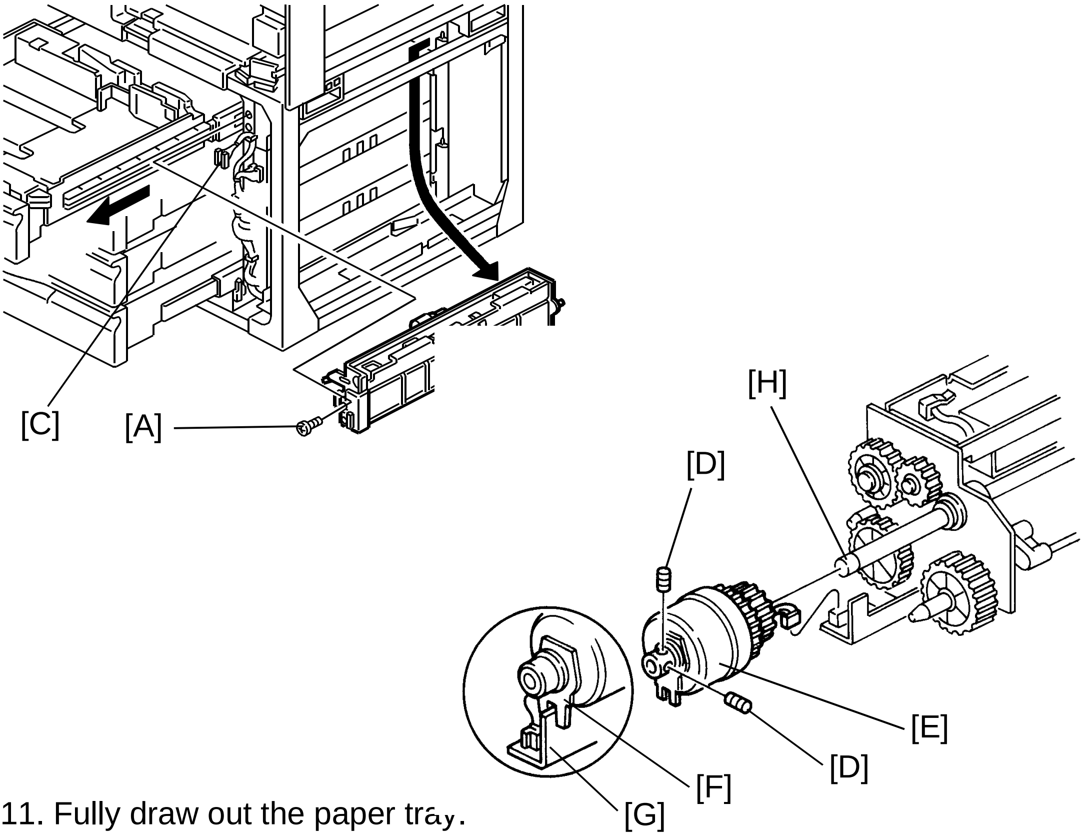
   NOTE: If the LCT is installed, remove it from the copier.
3. Remove the lower right cover [C]. (Refer to Lower Right Cover Removal.)
4. Remove the upper then the lower vertical transport guides [D] and [E].



n remove the right inner cover [B] (2 screws).

6. While holding the shaft [C] with an Allen key, remove the fixing screw [D], then remove the knob [E].
7. Remove the magnet [F].
8. Pull out all paper trays then remove the paper tray unit inner cover [G] (2 screws).
9. Remove the two connectors [H].
10. Remove the support bracket [I] (1 screw).

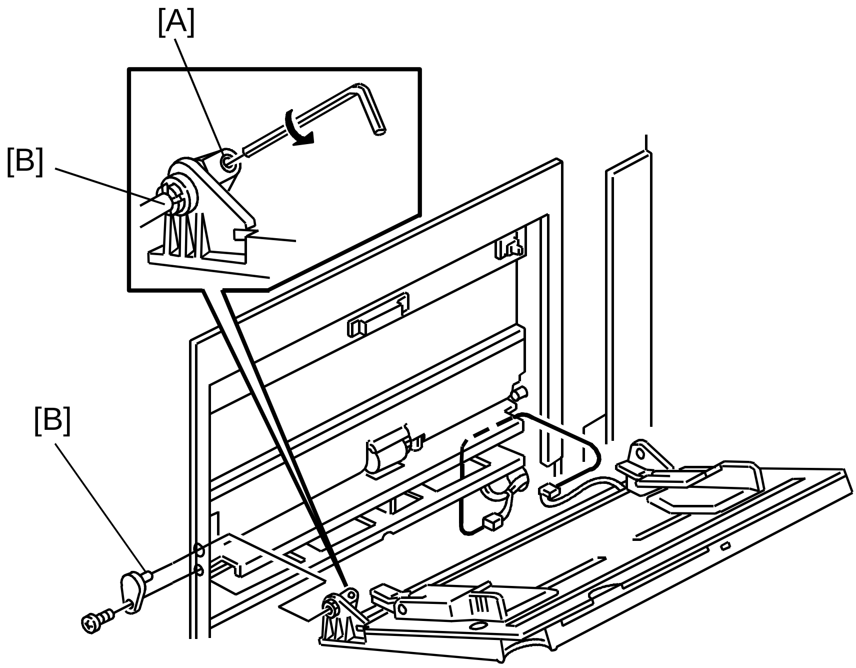
    NOTE: The support bracket is used only for the first feed station.



11. Fully draw out the paper tray.
12. Remove the two screws [A] fixing the tray feed unit [B].
13. Remove the tray feed unit.
14. Disconnect the connectors [C].
15. Loosen the two Allen screws [D].
16. Remove the tray feed clutch [E] (1 connector).

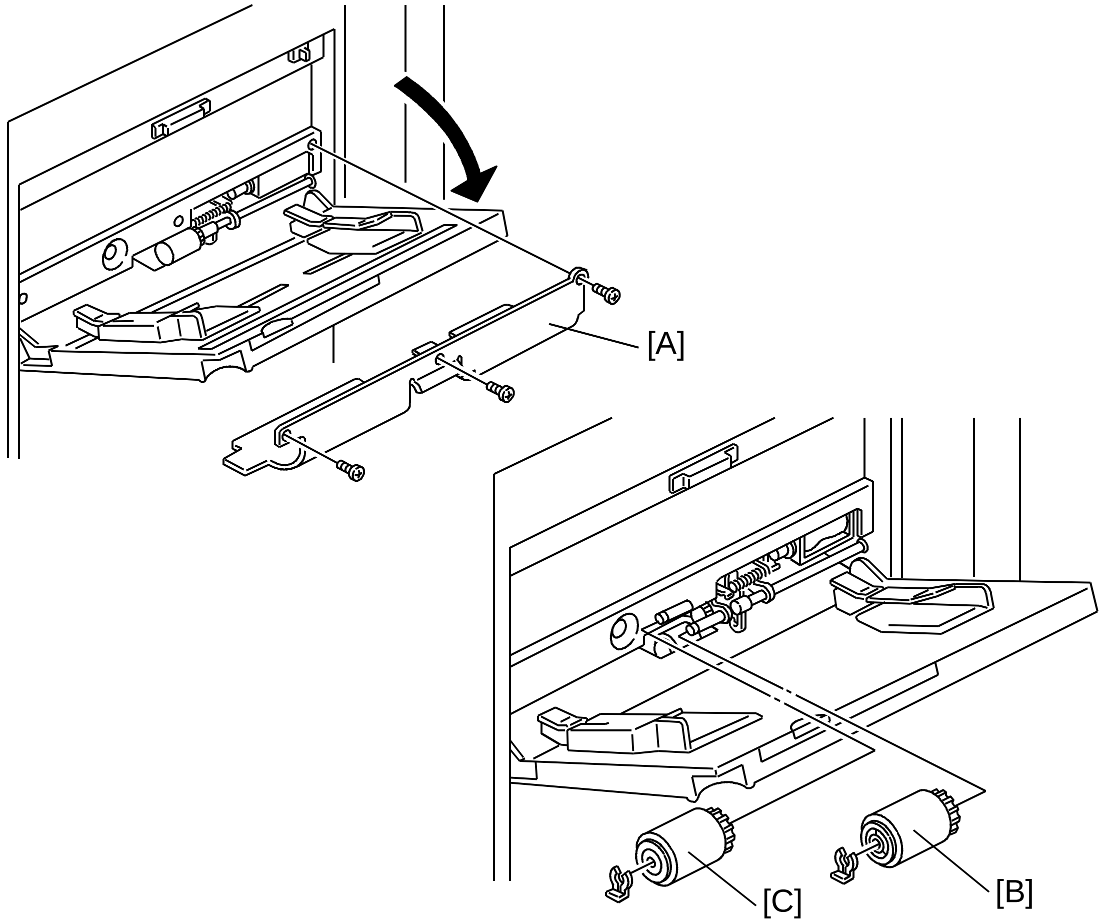
    NOTE: When re-installing the tray feed clutch, set the stopper [F] of the clutch on the edge of the bracket [G] then fully push in the clutch on the feed roller shaft [H] and secure the Allen screws [D].

6.8 BY-PASS FEED TABLE REMOVAL



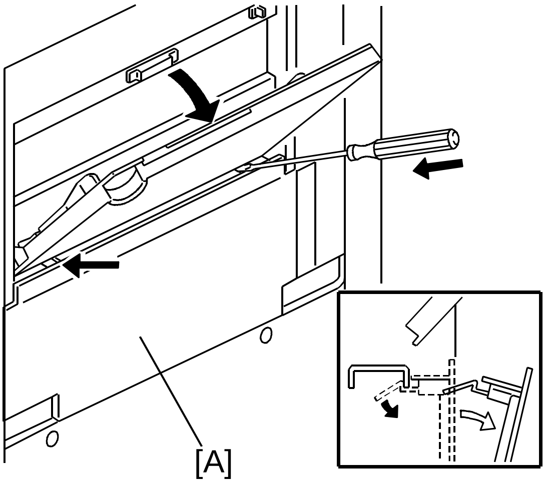
1. Remove the right inner cover. (Refer to Right Inner Cover Removal.)
2. Remove the total counter with bracket (1 screw, 1 connector).
3. Loosen the Allen screw [A] on the hinge.
4. Remove the hinge pin [B] (1 screw).
5. Remove the by-pass feed table (1 connector).

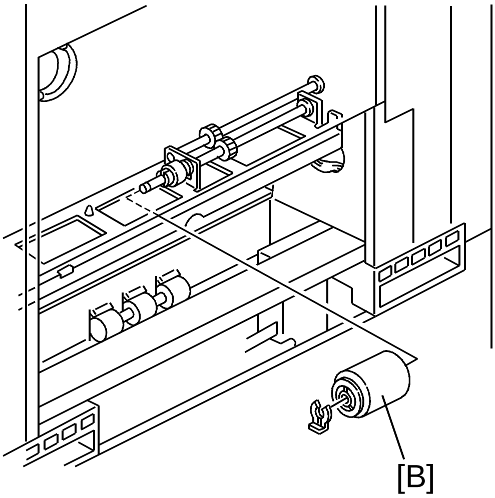
6.9 BY-PASS FEED ROLLERS REPLACEMENT



1. Open the by-pass feed table then remove the cover [A] (3 screws).
2. Replace the pick-up roller [B] (1 snap ring) and the feed roller [C] (1 snap ring).

NOTE: The paper feed (pick-up, feed, separation) rollers used in the by-pass feed table and LCT are different from the paper feed rollers used in the 1st ~ 3rd feed units in the paper tray unit. They are not interchangeable.

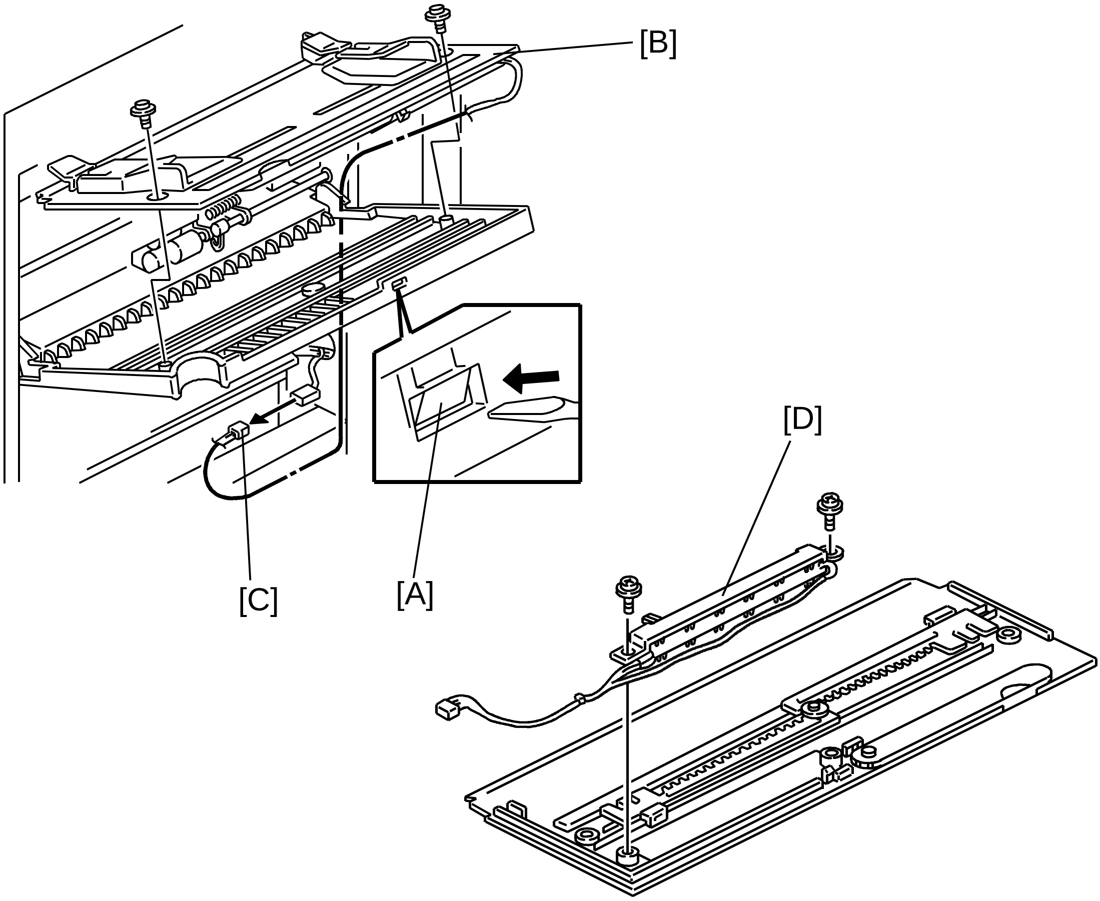




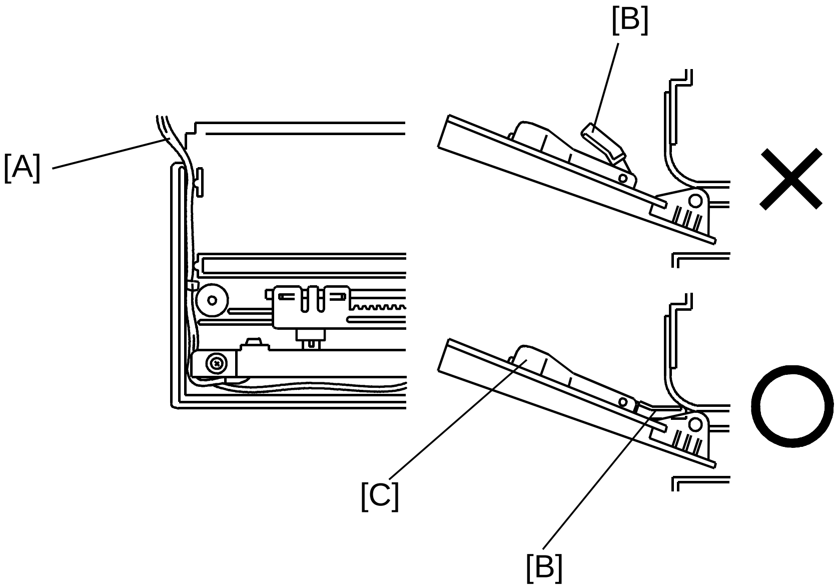
3. Remove the feed unit cover [A] as shown.

4. Replace the separation roller [B] (1 snap ring).

6.10 BY-PASS PAPER SIZE SENSOR REPLACEMENT



1. Turn off the main switch.
2. Open the by-pass table and remove the feed unit cover. (Refer to Feed Unit Cover Removal.)
3. While pushing the hook [A] with the head of the flat head screw driver as shown, remove the table assembly [B] (2 screws, 1 connector [C]).
4. Remove the by-pass paper size sensor [D] (2 screws).

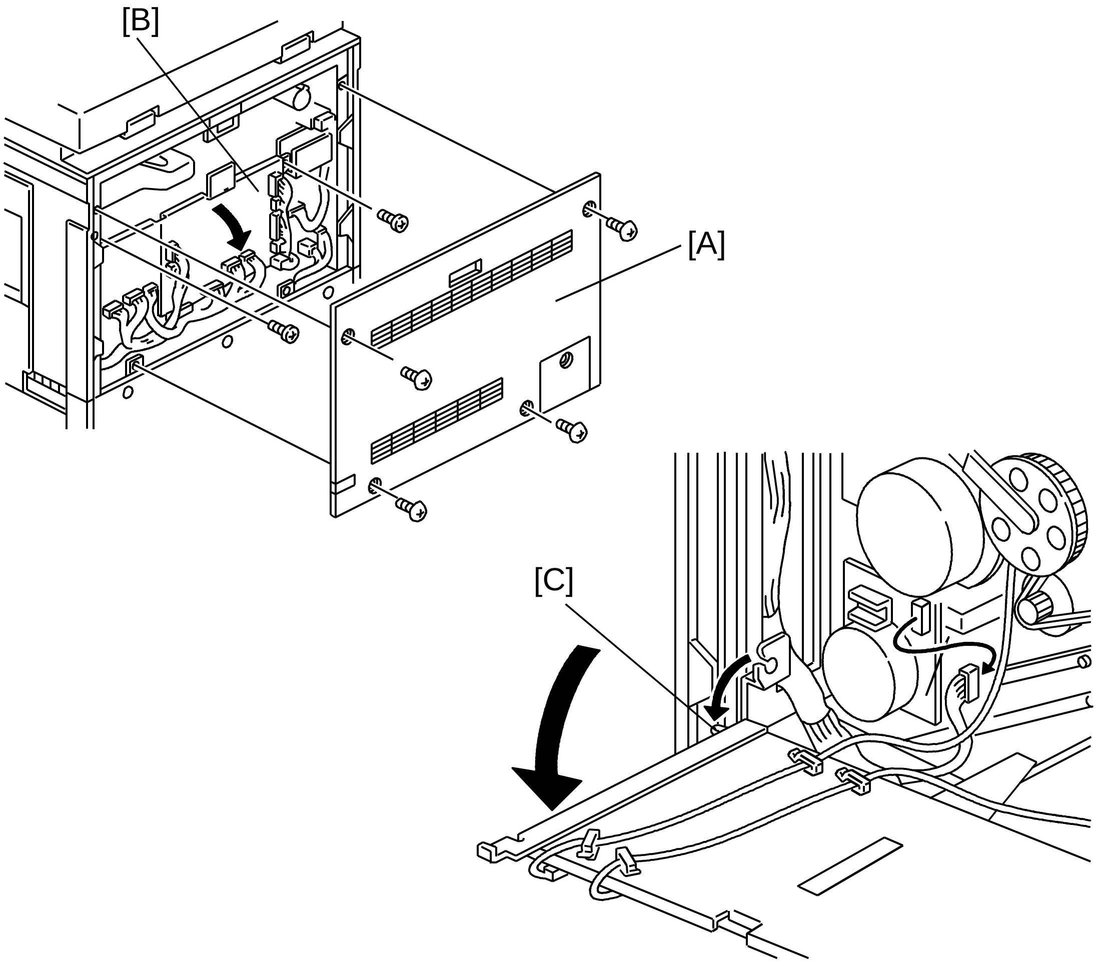


5. Re-install the by-pass paper size sensor then reassemble the by-pass feed table.

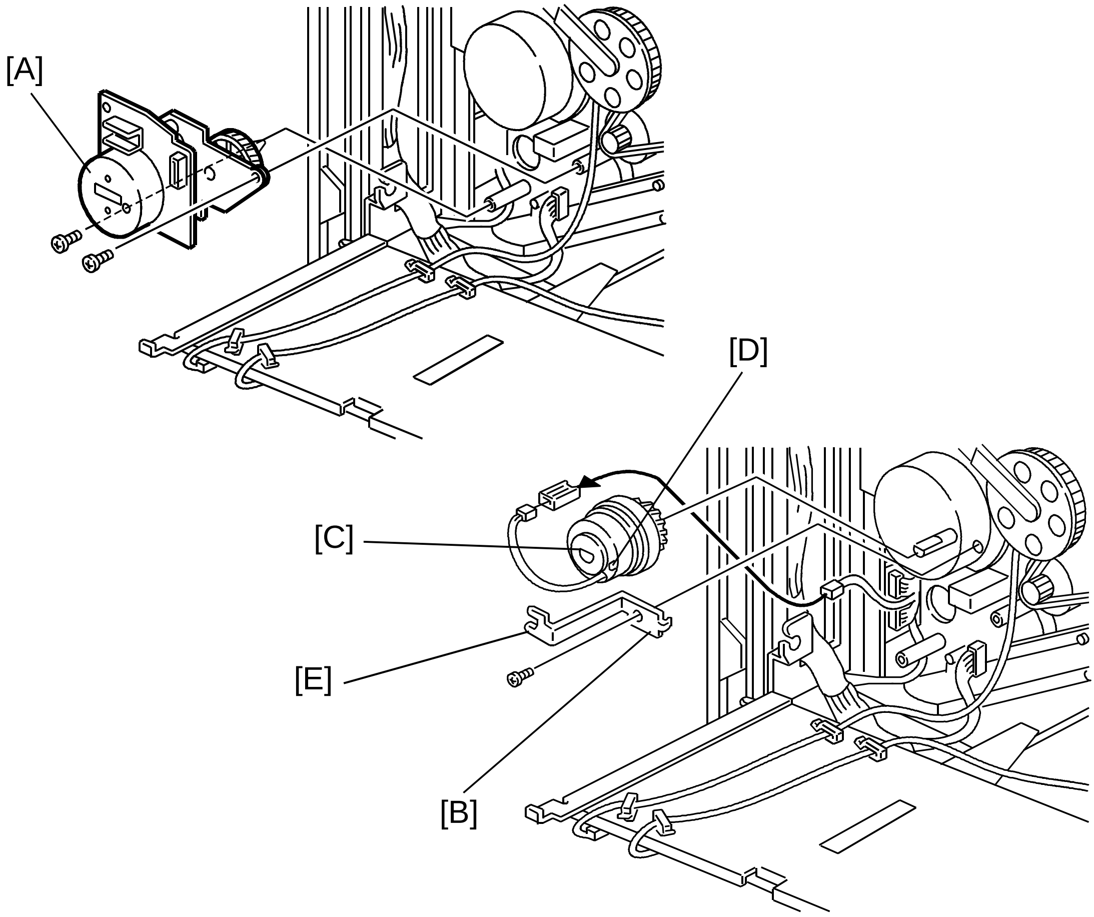
   NOTE: When installing the table assembly, route the wires [A] correctly as shown.
   The paper guides [B] must be in the lower position as shown.

6. Perform the by-pass feed sensor paper size correction ($\boxed{1}$ SP Adjustment mode – PAGE 9) as follows:
   1) Enter SP mode (refer to Service Program Access Procedure) then access $\boxed{1}$ SP Adjustment mode – PAGE 9.
   2) Place the side fence [C] at the A4 or 81/2 x 11 sideways position according to the paper size decal on the table.
   3) Place the side fence [C] at the A6 or 41/2 x 51/2 lengthwise position according to the paper size decal on the table.

6.11 BY-PASS FEED CLUTCH REMOVAL



1. Remove the upper rear cover [A]. (Refer to Upper Rear Cover Removal.)
2. Lower the main control board [B] (2 screws).
3. Unhook the main control board bracket hinge [C].



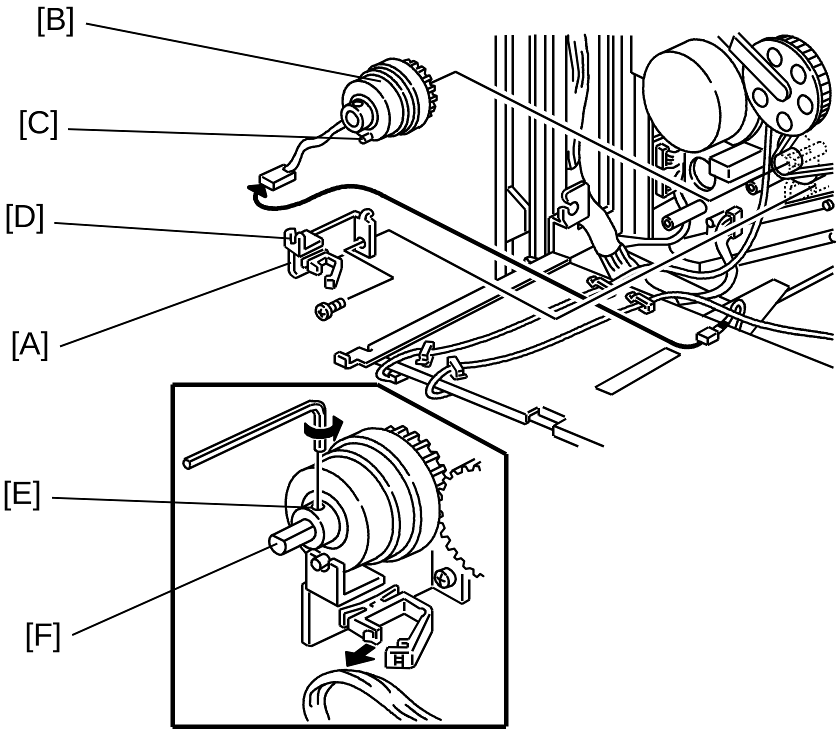
4. Remove the by-pass feed motor [A] (2 screws).

5. Remove the clutch stopper [B] (1 screw).

   NOTE: When re-installing the by-pass feed clutch [C], set the pin [D] of the clutch in the cutout [E] of the stopper.

6. Remove the by-pass feed clutch (1 connector).

6.12 REGISTRATION CLUTCH REMOVAL



1. Lower then unhook the main control board bracket hinge. (Refer to By-Pass Feed Clutch Removal.)

2. Remove the clutch stopper [A] (1 screw).

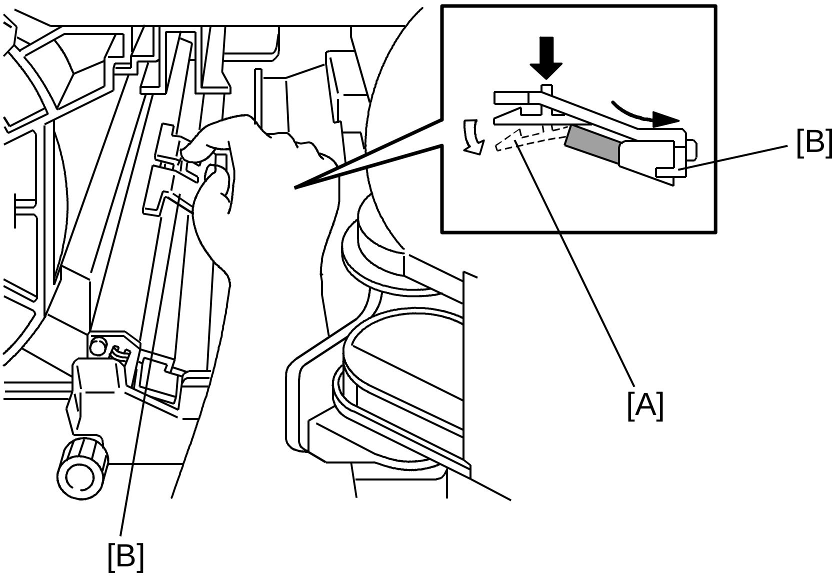
   NOTE: When re-installing the registration clutch [B], set the pin [C] of the clutch in the cutout of the stopper [D].

3. Loosen the Allen screw [E].

4. Remove the registration clutch (1 connector).

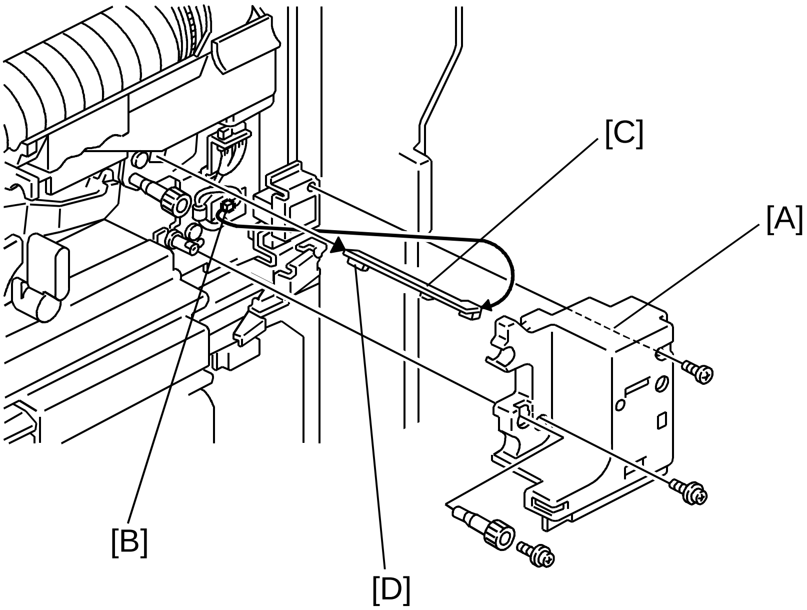
   NOTE: When re-installing the registration clutch, fully push in the clutch on the registration roller shaft [F] and secure the Allen screw.

6.13 PAPER DUST CLEANER REMOVAL



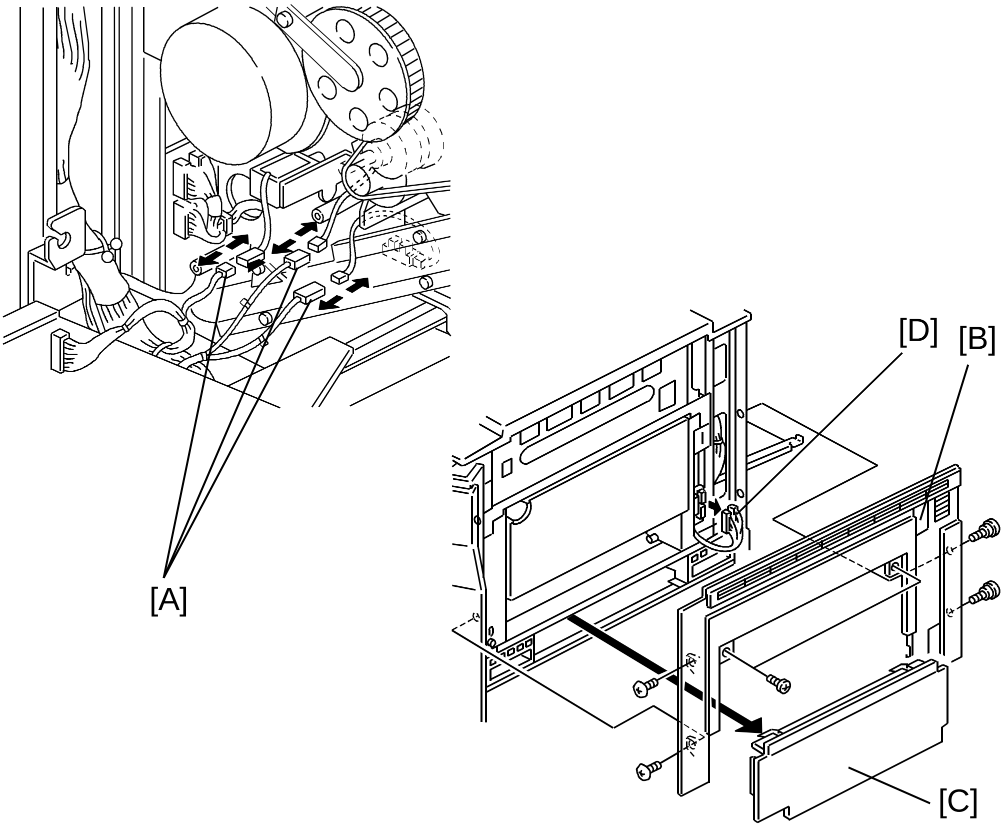
1. Remove the development unit. (Refer to Development Unit Removal.)
2. While pushing down the hook lever [A], remove the paper dust cleaner [B].
3. Remove paper dust inside the paper dust cleaner and clean the inside of the cleaner with a dry cloth or a blower-brush.

6.14 REGISTRATION SENSOR REMOVAL



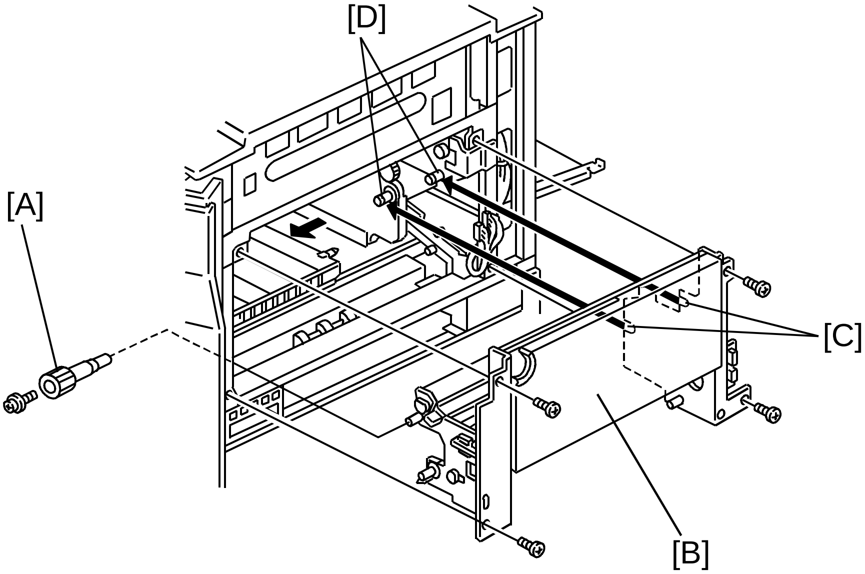
1. Remove the right inner cover [A]. (Refer to Right Inner Cover Removal.)
2. Disconnect the connector [B].
3. Pull out the registration sensor assembly [C].
4. Clean the photo sensor [D] with a blower-brush.

6.15 COPIER FEED UNIT REMOVAL



1. Remove the development unit. (Refer to Development Unit Removal.)
2. Remove the right inner cover. (Refer to Right Inner Cover Removal.)
3. Remove the by-pass feed motor. (Refer to By-pass Feed Clutch Removal.)
4. Remove the three connectors [A] for the guide plate positioning solenoid, registration clutch, and the pick-up solenoid.

   NOTE: Before disconnecting the connectors, make sure to identify them. Some of the connectors use identical pin leads but they are not interchangeable. Take special care not to misconnect the positioning solenoid and registration clutch connectors.
5. Remove the upper right cover [B] and the paper feed unit cover [C].
6. Disconnect the three connectors [D].
7. Draw out the duplex unit about 10 cm.



8. Remove the registration roller knob [A] (1 screw).

9. Remove the copier feed unit [B] (4 screws).

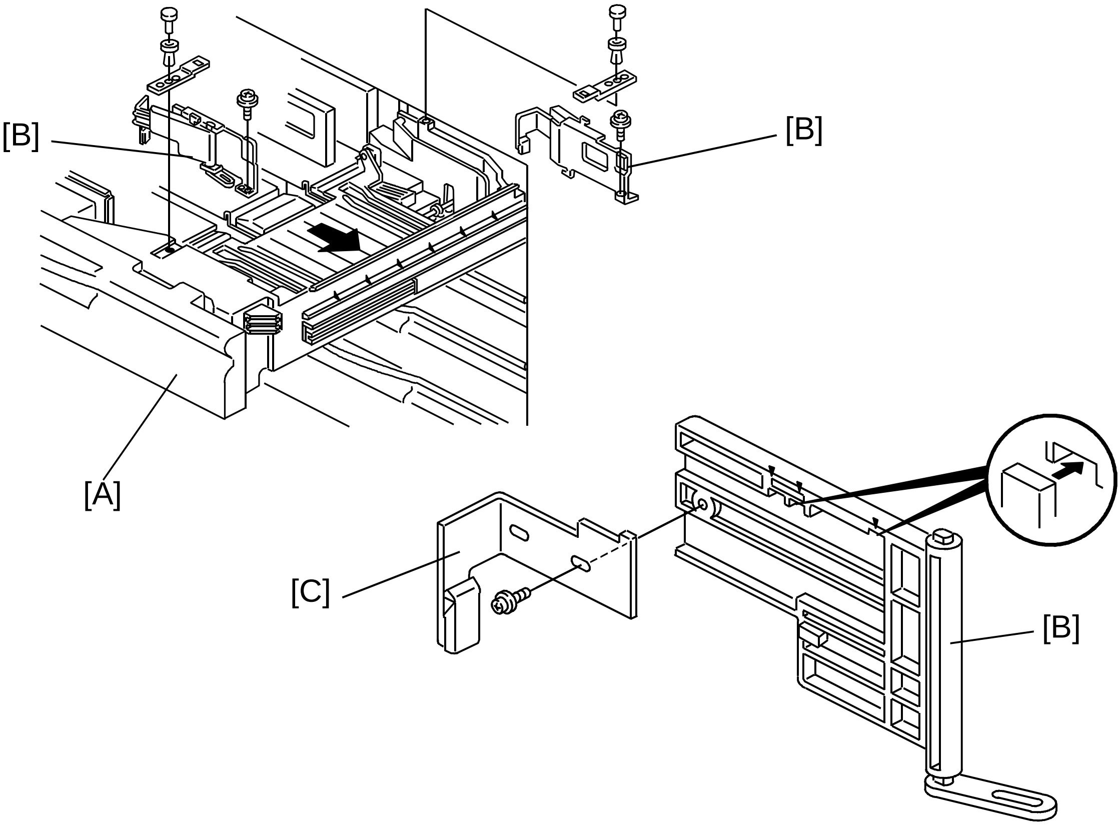
NOTE: When installing the copier feed unit to the copier:

1) Do not pinch the harness.
2) Keep the duplex unit drawn out.
3) Fit the two cut outs [C] to the pins [D].

6.16 TANDEM FEED TRAY PAPER SIZE CHANGE

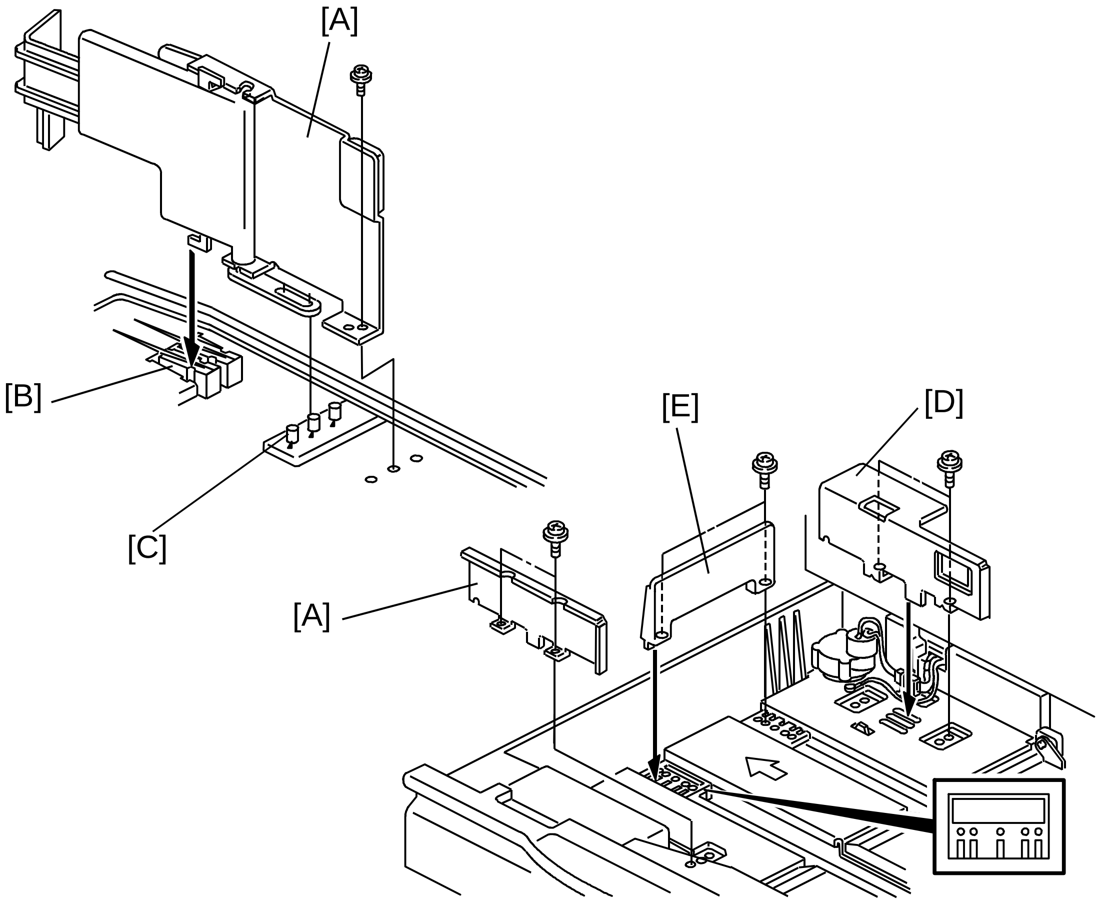
NOTE: 1. At the factory, all paper trays (1st, 2nd and 3rd) are set as A4 sideways. At the customer's request, change the paper size as follows.

2. For the 550 sheet fixed paper tray and the 1500 sheet built-in LCT, refer to the installation procedure section.



- Used as tandem tray for A4 sideways or smaller size paper -

1. Draw out the tandem tray [A].
2. Remove the rear and front side fences [B] (one screw and one pushlock each) on the right tandem tray.
3. Re-position the end fences [C] on both rear and front side fences (1 screw each) according to the paper size.



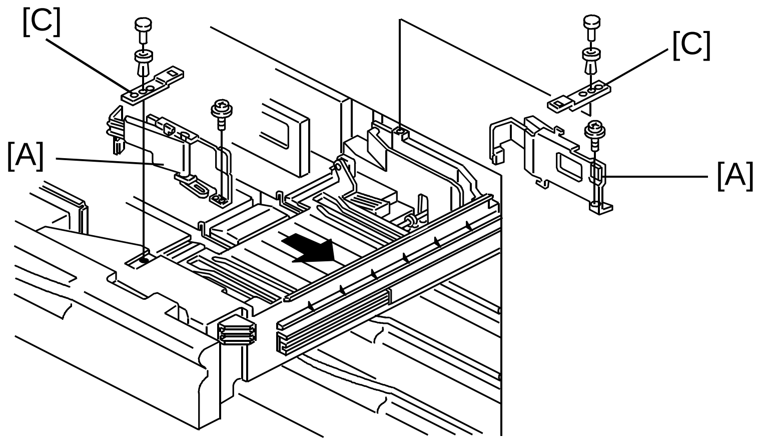
4. Re-install both side fences [A] to the appropriate position according to the paper size, as shown.

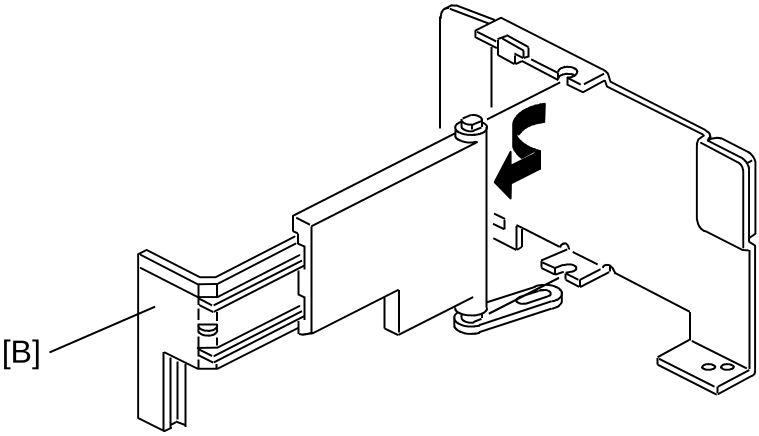
   NOTE: The position of the side fence holders [B] and the pins [C] on the lack gear differs according the paper size (from the outside pin: A4, 11", B5).

5. Change the position of the front and rear side fences [D] (2 screws each) and end fence [E] (2 screws) on the left tandem tray according to the paper size.

6. Enter SP mode (refer to Service Program Access Procedure) and access 4 SP Special Features – PAGE 5.

7. Select the appropriate paper size according to position of the side and end fences.



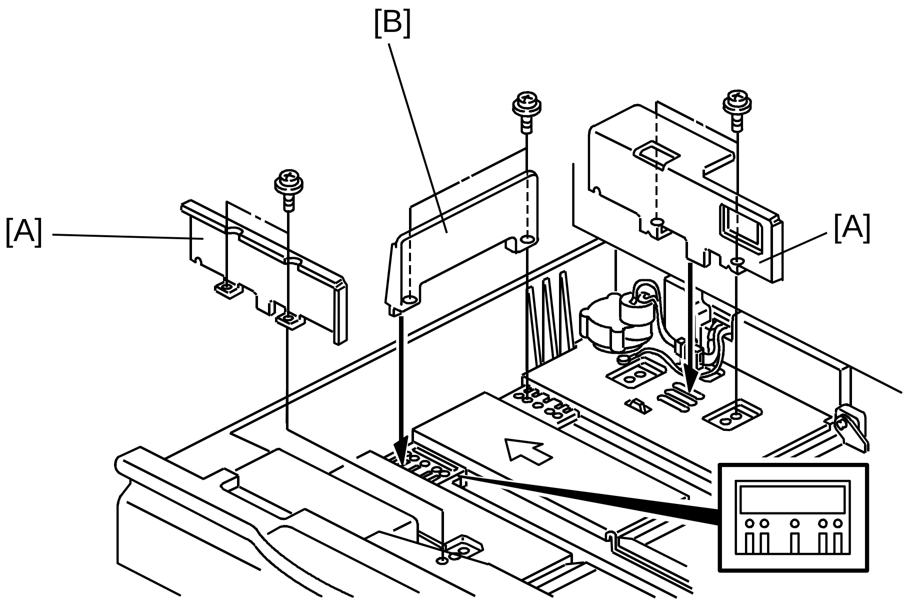


- Used as fixed tray for paper longer than A4/Letter sideways -

1. Draw out the tandem tray.
2. Remove the rear and the front side fences [A] (1 screw and 1 push-lock pin each) on the right tandem tray.
3. Remove the end fences [B] on both the rear and the front side fences (2 screws each).

   NOTE: It is not necessary to re-install the end fences.
4. Install both side fences to the appropriate position according to the paper size (one screw and one lock pin for each side fence).

   NOTE: Support plates [C] are used only for A4, B5, and letter lengthwise sizes.
   Keep the end fences and support plates for future use.

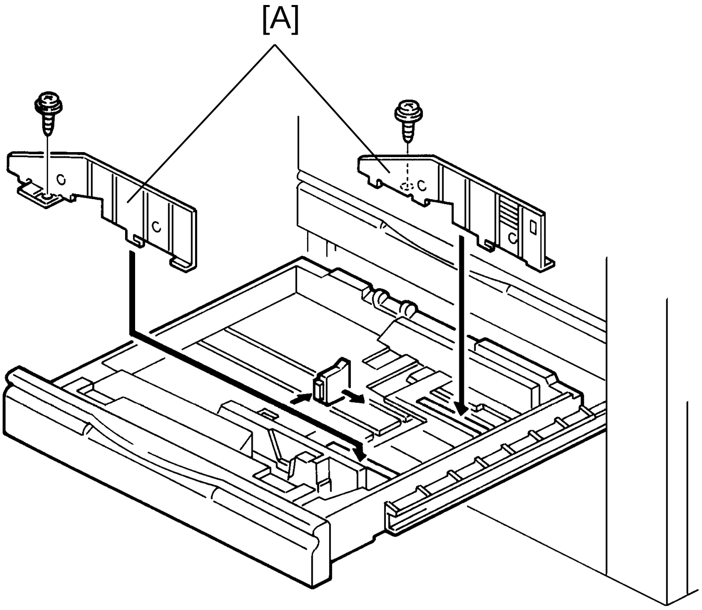


5. Change the position of the front and rear side fences [A] (2 screws each) and end fence [B] (2 screws) of the left tandem tray according to the paper size.
6. Enter SP mode (refer to Service Program Access Procedure) and access $\boxed{4}$ SP Special Features – PAGE 5.
7. Select the appropriate paper size according to the side and end fences position.

6.17 UNIVERSAL TRAY PAPER SIZE CHANGE

At the factory, the universal paper tray is set as A4/81/2" x 11" sideways. Normally, paper size is changed by the customer by following the operating instructions.

Only when the customer needs the A5/51/2" x 81/2" lengthwise paper size does a service representative need to change the paper size. In this case, proceed as follows:

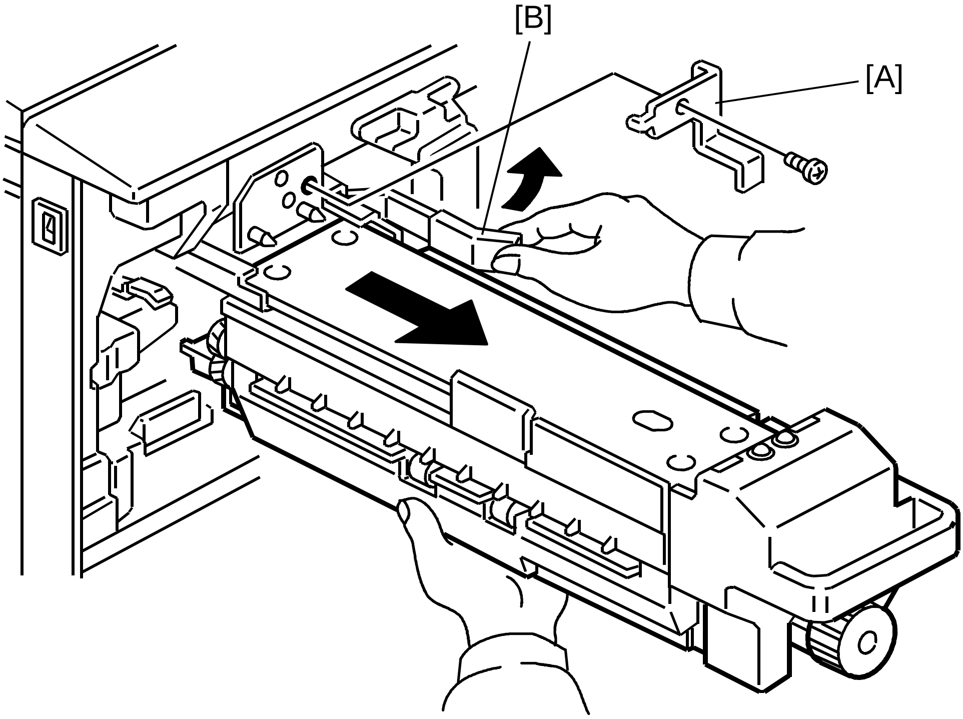


1. Install the front and rear side fences [A] (2 screws).

NOTE: These side fences are the same as the side fences used in the 550 sheet fixed paper tray.
These side fences are options, order them as service parts.

7. FUSING UNIT

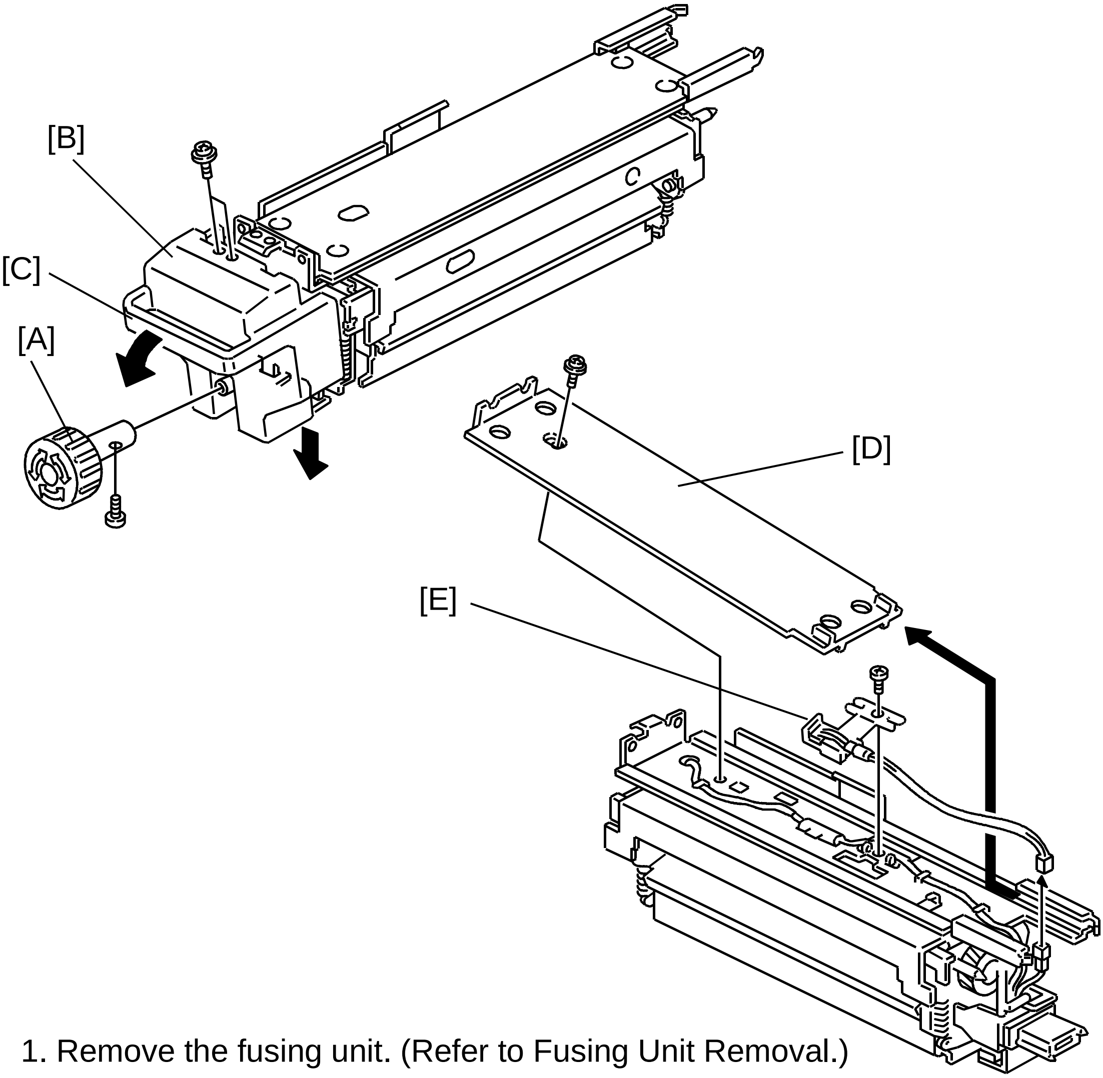
7.1 FUSING UNIT REMOVAL



1. Turn off the main switch.
2. Open the left front door.
3. Remove the stopper [A] (1 screw).
4. While releasing the lever [B], pull out the fusing unit as shown.

   NOTE: Hold the bottom of the fusing unit as shown.

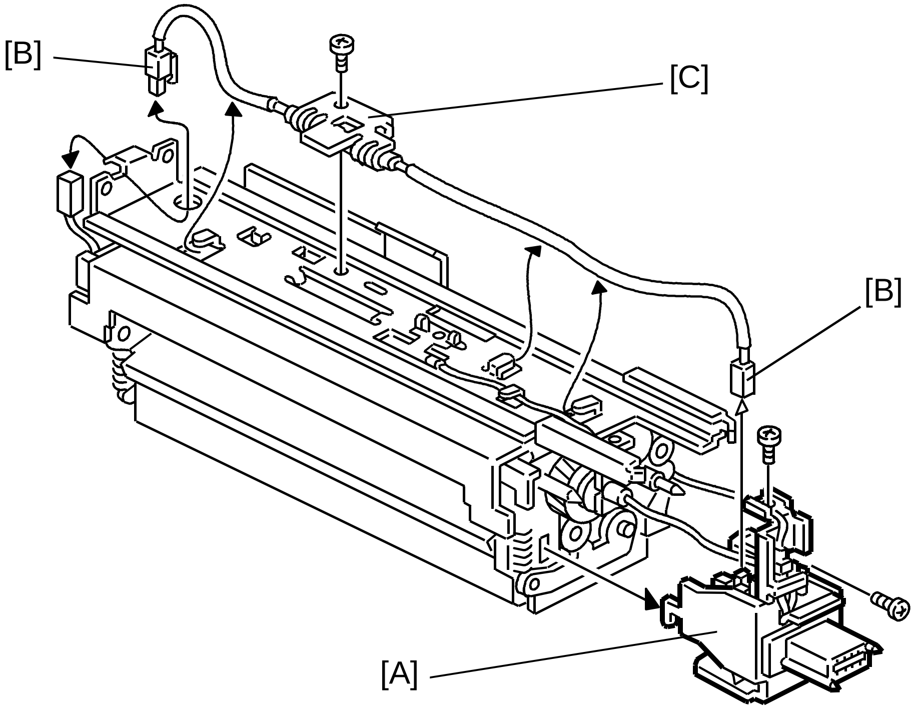
7.2 FUSING THERMISTOR REPLACEMENT



1. Remove the fusing unit. (Refer to Fusing Unit Removal.)
2. Remove the knob [A] (1 screw).
3. Remove the two screws fixing the fusing front cover [B].
4. Pull the lever [C] then lower the cover [B] to unhook the fusing unit.
5. Remove the fusing unit upper cover [D] (1 screw).
6. Replace the thermistor [E] (1 screw, 1 connector).

NOTE: When re-assembling the fusing unit, secure the harness in the clamps correctly.
Apply a little silicone oil at the thermistor’s point of contact with the hot roller.

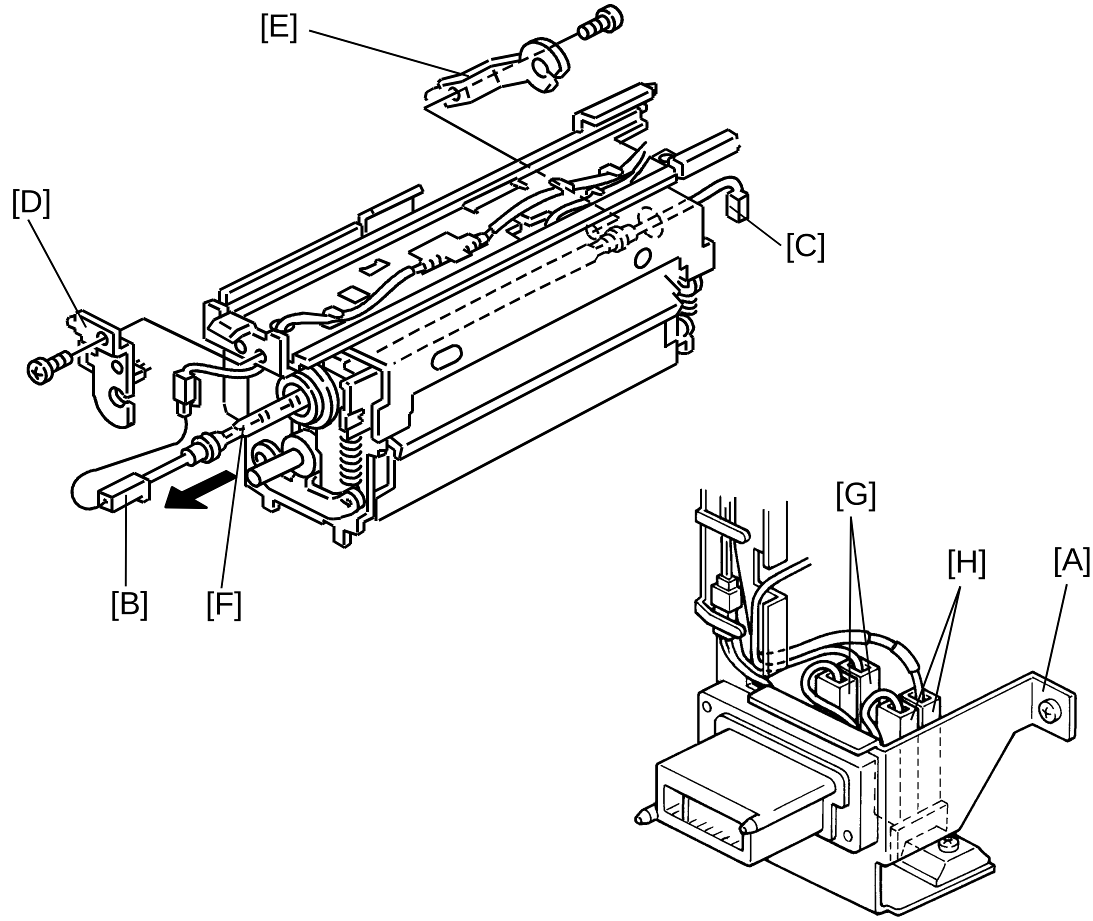
7.3 FUSING THERMOFUSE REPLACEMENT



1. Remove the fusing unit upper cover. (Refer to Fusing Thermistor Replacement.)
2. Remove the terminal bracket [A] (2 screws, 1 hook).
3. Disconnect the two connectors [B].
4. Replace the fusing thermofuse [C] (1 screw).

   NOTE: When re-assembling the fusing unit, secure the harness in the clamps correctly.

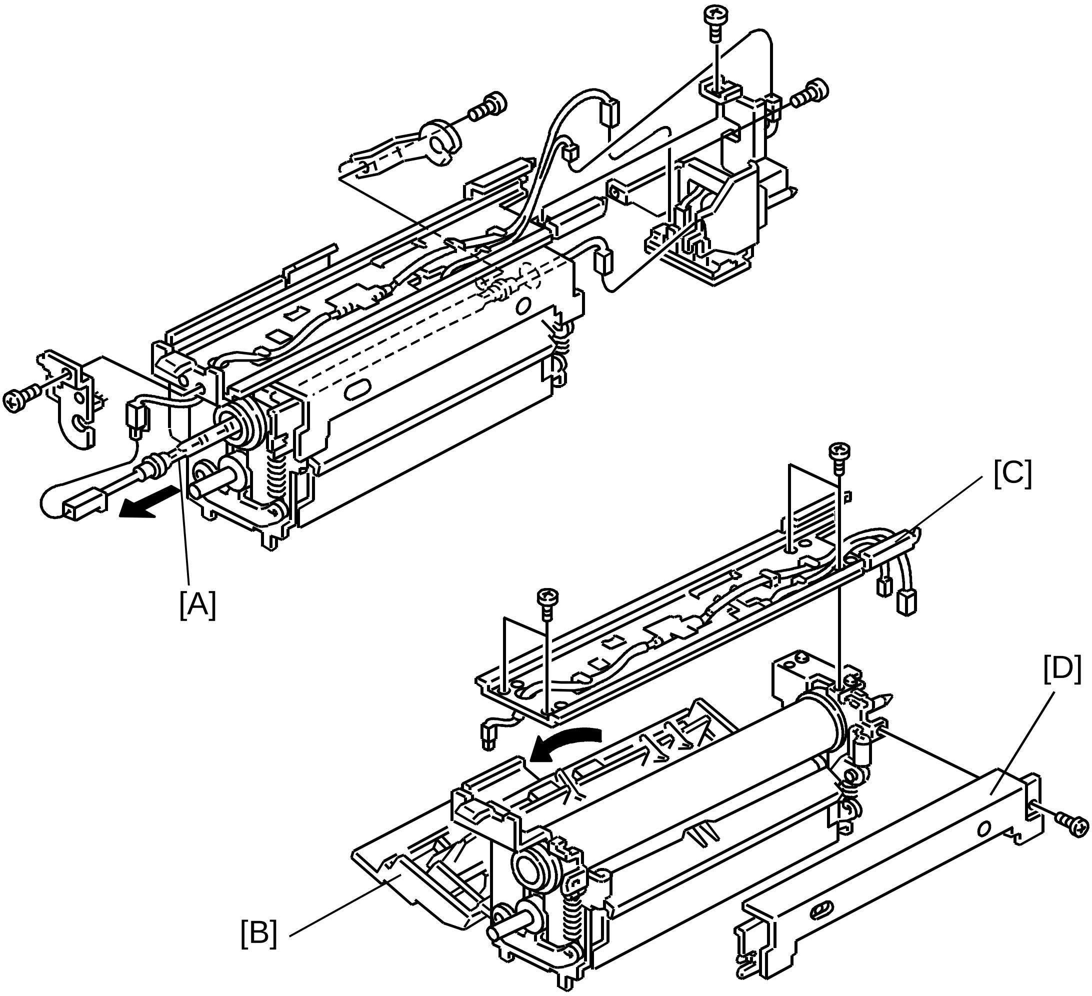
7.4 FUSING LAMP REPLACEMENT



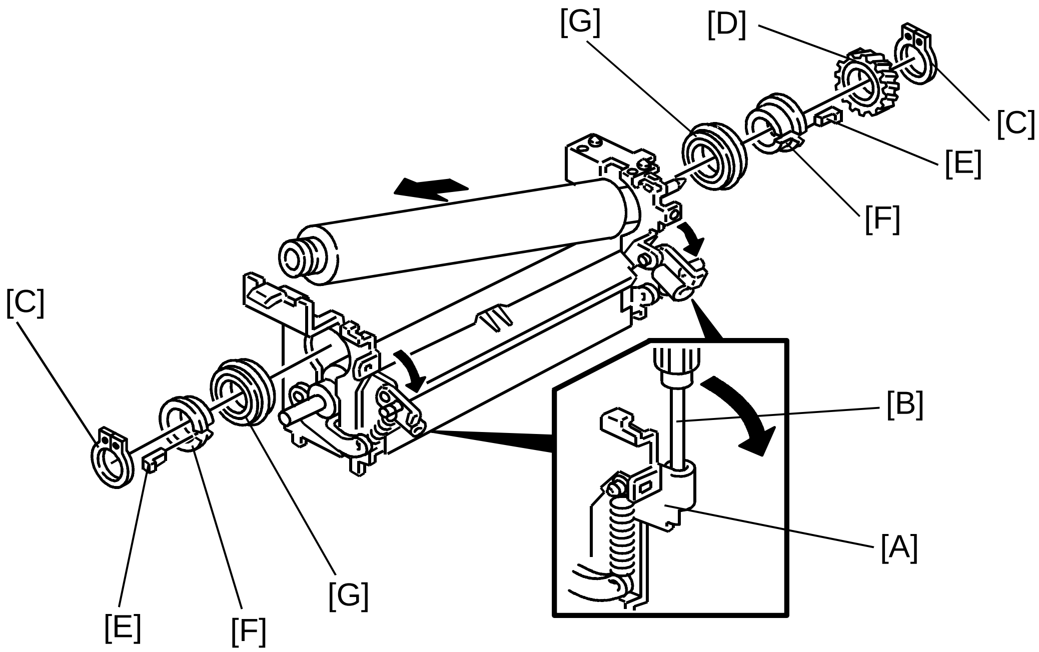
1. Remove the fusing unit. (Refer to Fusing
2. Remove the terminal bracket [A] (2 screws).
3. Disconnect the front connector [B] and the rear connector [C].
4. Remove the front fusing lamp holder [D] and the rear fusing lamp holder [E] (1 screw each).
5. Replace the fusing lamp [F].

   NOTE: Locate the yellow connector [C] of the fusing lamp to the rear side.
   Set the connectors from the fusing lamp (yellow) [G] and from the thermofuse (white) [H] in the correct position on the terminal.

7.5 HOT ROLLER REPLACEMENT



1. Remove the fusing lamp [A]. (Refer to Fusing Lamp Replacement.)
2. Lower the fusing exit assembly [B].
3. Remove the upper stay [C] (4 screws).
4. Remove the upper entrance guide [D] (1 screw).

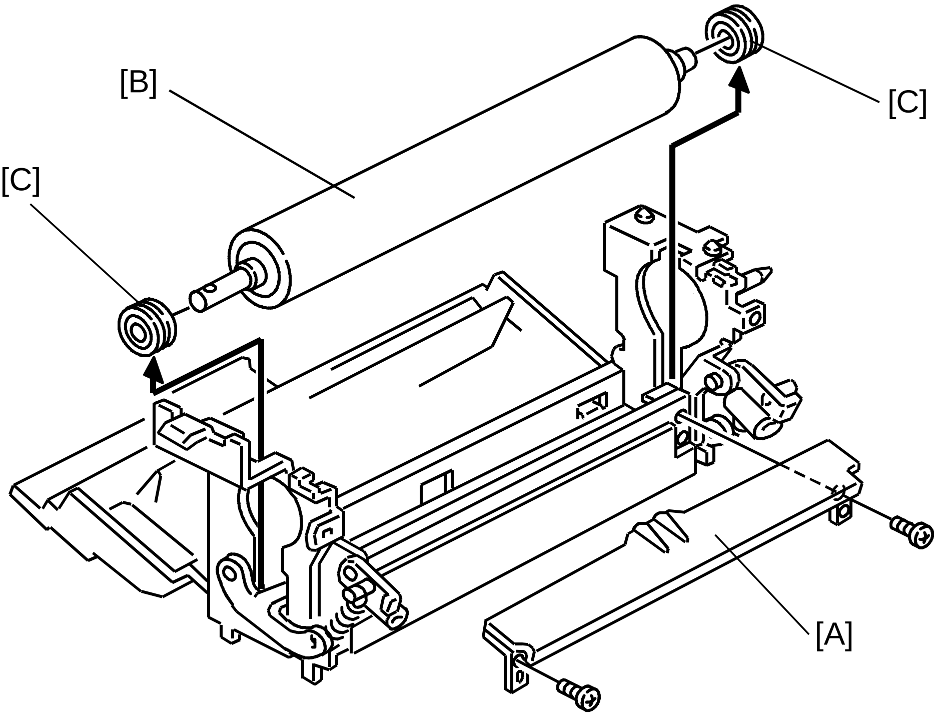


5. Lower both side pressure spring holders [A] by using the screw driver [B] as a lever.
6. Remove the front and rear C-rings [C], gear [D], antistatic spacers [E] isolating bushings [F] and bearings [G].

   NOTE: When installing a new fusing roller:

   1) Lubricate the inner and the outer surface of the isolating bushings [F] with BARRIERTA L55/2 grease.
   2) Lubricate the fusing drive gears and their shafts with grease G501.
   3) Peel off 3 cm (1 inch) form both ends of the protective sheet, and install the hot roller.
      Before applying fusing pressure, remove the rest of the protective sheet.

7.6 PRESSURE AND BEARING ROLLER REPLACEMENT

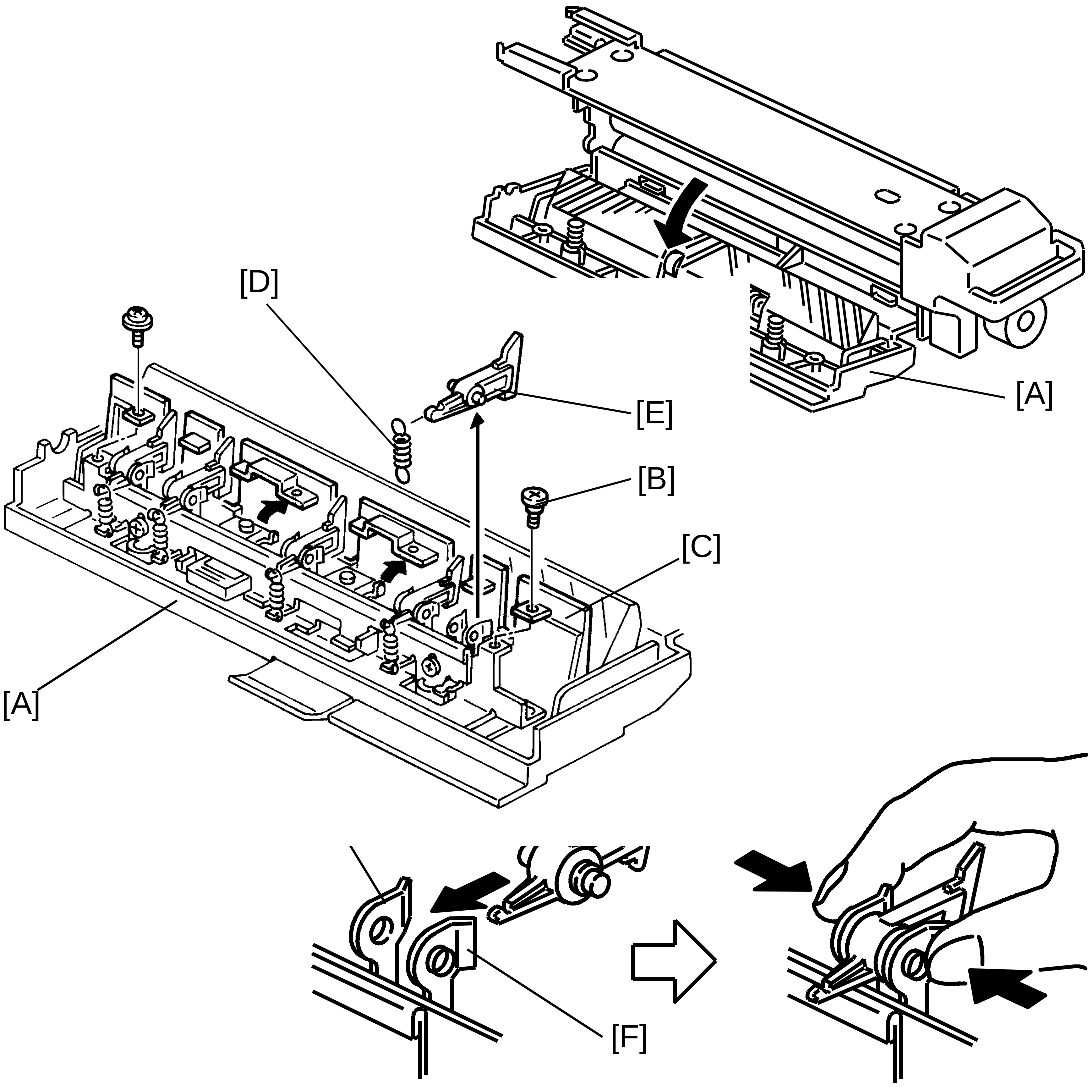


1. Remove the hot roller. (Refer to Hot Roller Replacement.)
2. Remove the lower fusing entrance guide [A] (2 screws).
3. Lift the pressure roller [B] and remove it.
4. Replace pressure roller and bearings [C].

   NOTE: When installing a new pressure roller:

   1) Lubricate the roller shaft and the inner surface of the bearings with BARRIERTA L55/2 grease.
   2) Lubricate the fusing drive gears and their shafts with G501 grease.
5. Re-assemble the machine.

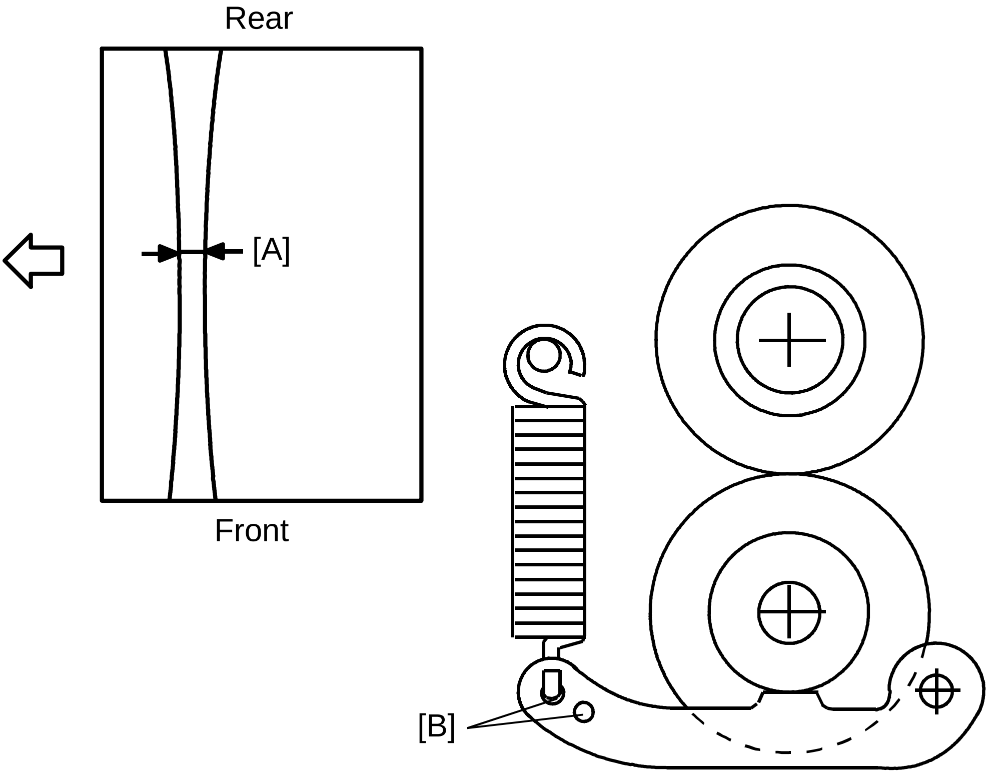
7.7 FUSING STRIPPER PAWL REPLACEMENT



1. Turn off the main switch and pull out the fusing unit.
2. Lower the fusing exit assembly [A].
3. Remove the two screws (the front screw [B] is a stepped screw) fixing the upper exit guide [C].
4. Unhook the spring [D] then replace the strippers [E].

NOTE: After setting the fusing stripper pawl, confirm that the strippers are correctly held by the stripper holders [F] as shown.
If not, remove the stripper and bend the holders [F] inward.
Apply the grease-Barrierta L55/2 on the inner surface of the holder [F].

7.8 FUSING PRESSURE ADJUSTMENT

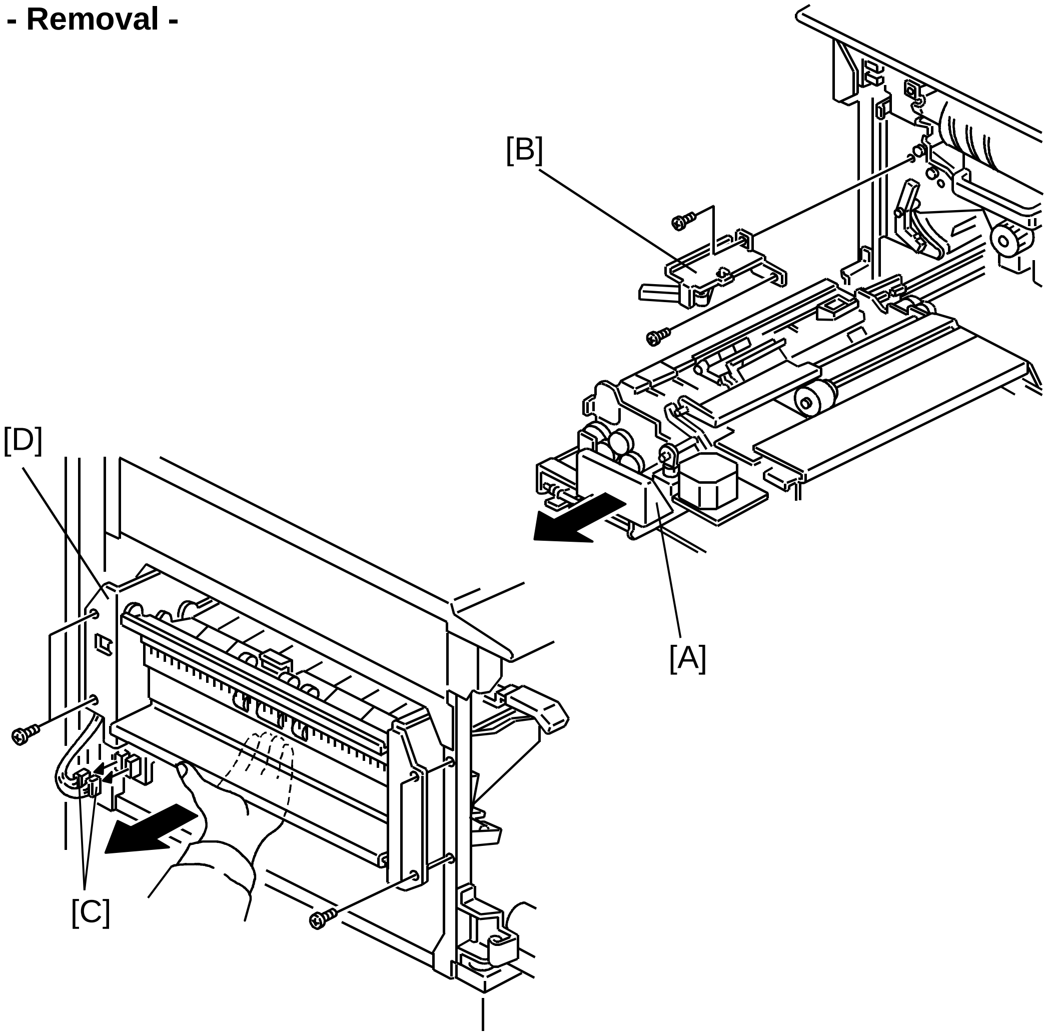


NIP BAND WIDTH ADJUSTMENT STANDARD: 8.1 ± 0.8 mm

1. Make a black copy (sky shot, A3 / Double Letter paper).
2. As soon as the paper starts to exit, open the left door to stop the paper in the fusing unit.
3. Wait about 20 seconds, then turn the fusing knob quickly to deliver the paper.
4. Measure the nip band width [A] at the center.
5. If the nip band width is not within 8.1 ± 0.8 mm, change the spring hook position [B].

7.9 PAPER EXIT UNIT REPLACEMENT

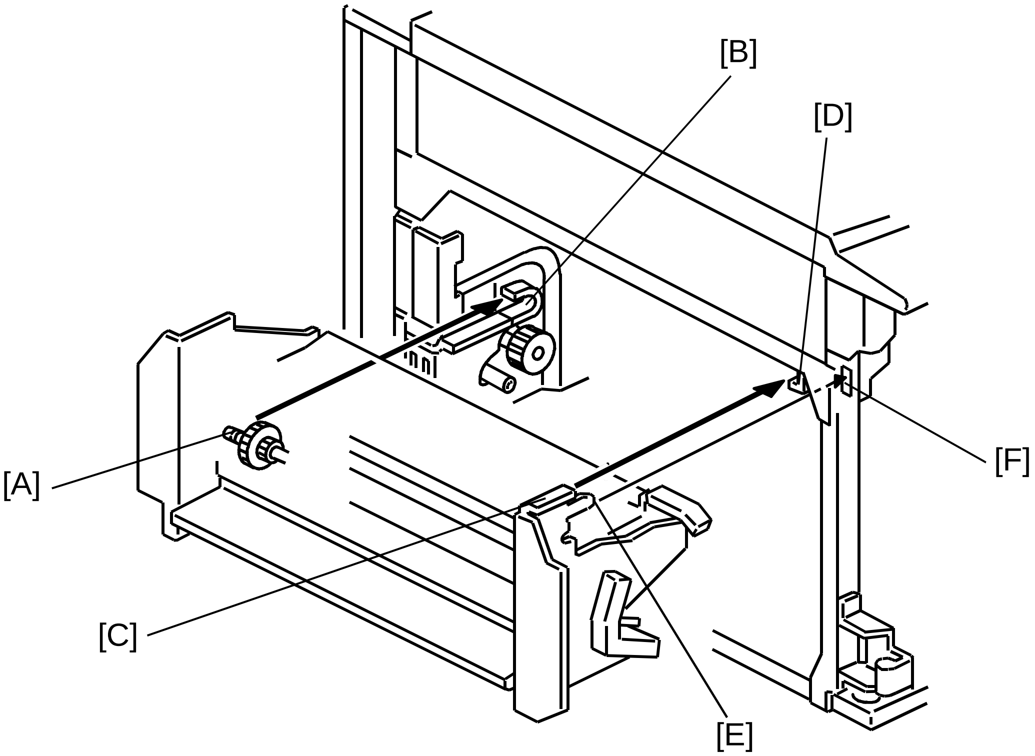
- Removal -



1. Remove the upper left cover. (Refer to Upper Left Cover Removal.)
2. Draw out the duplex unit [A].
3. Remove the lever bracket [B] (2 screws).
4. Disconnect the two connectors [C].
5. Take out the paper exit unit [D] (4 screws).

NOTE: Place the paper exit unit so that the paper exit roller comes to the bottom to prevent the brush roller from being pressed and damaged.

- Installation -



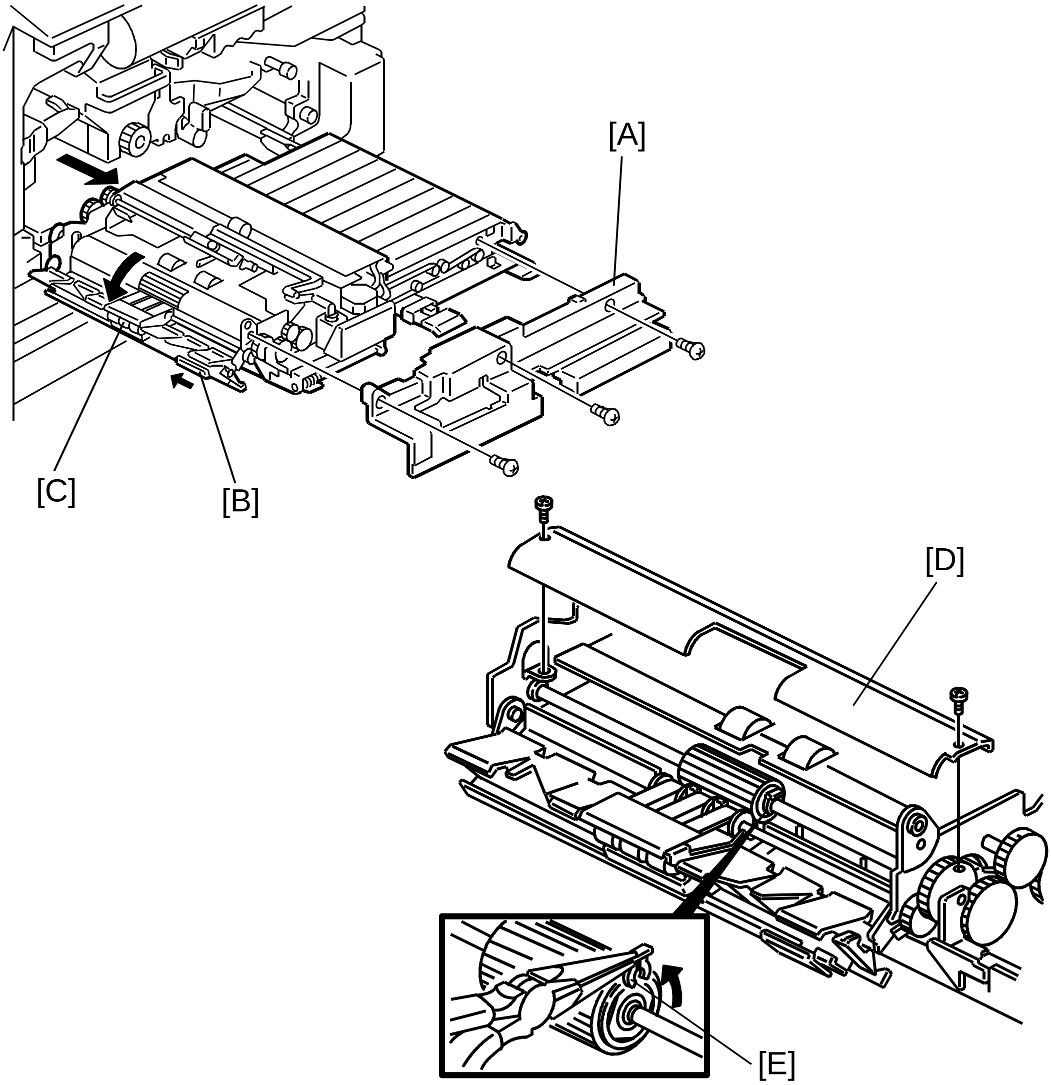
1. Set the paper exit unit in the following order:
   1) Set the drive shaft [A] on the left rail [B].
   2) Set the plate [C] on the right rail [D].
   3) Set the positioning pin [E] in the hole [F].

2. Install the paper exit unit (2 connectors, 4 screws).

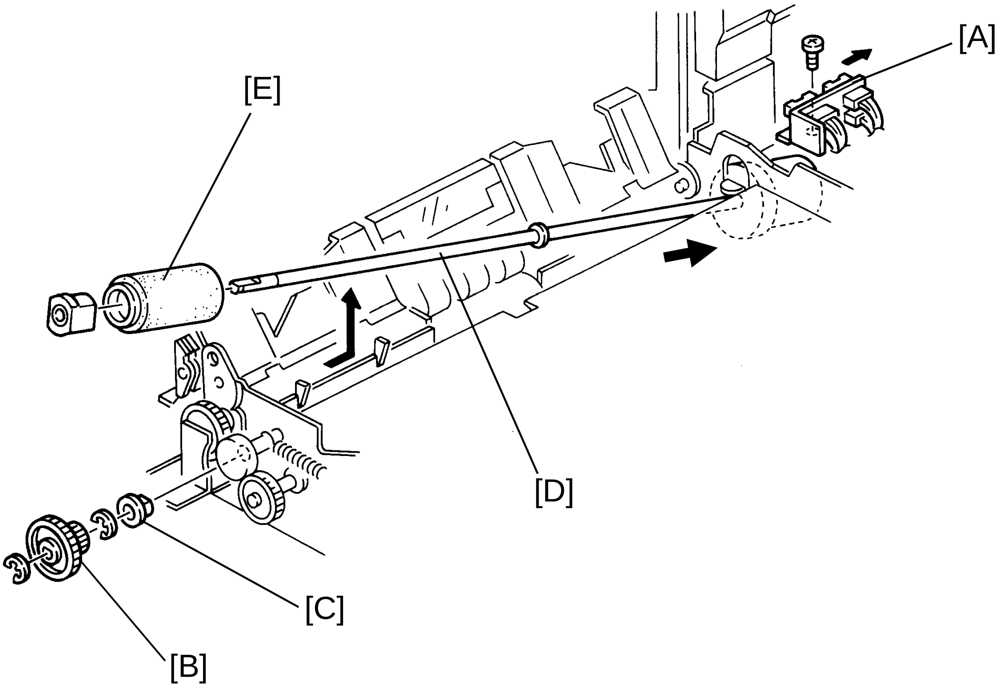
3. Re-assemble the copier.

8. DUPLEX UNIT

8.1 FEED ROLLER REPLACEMENT

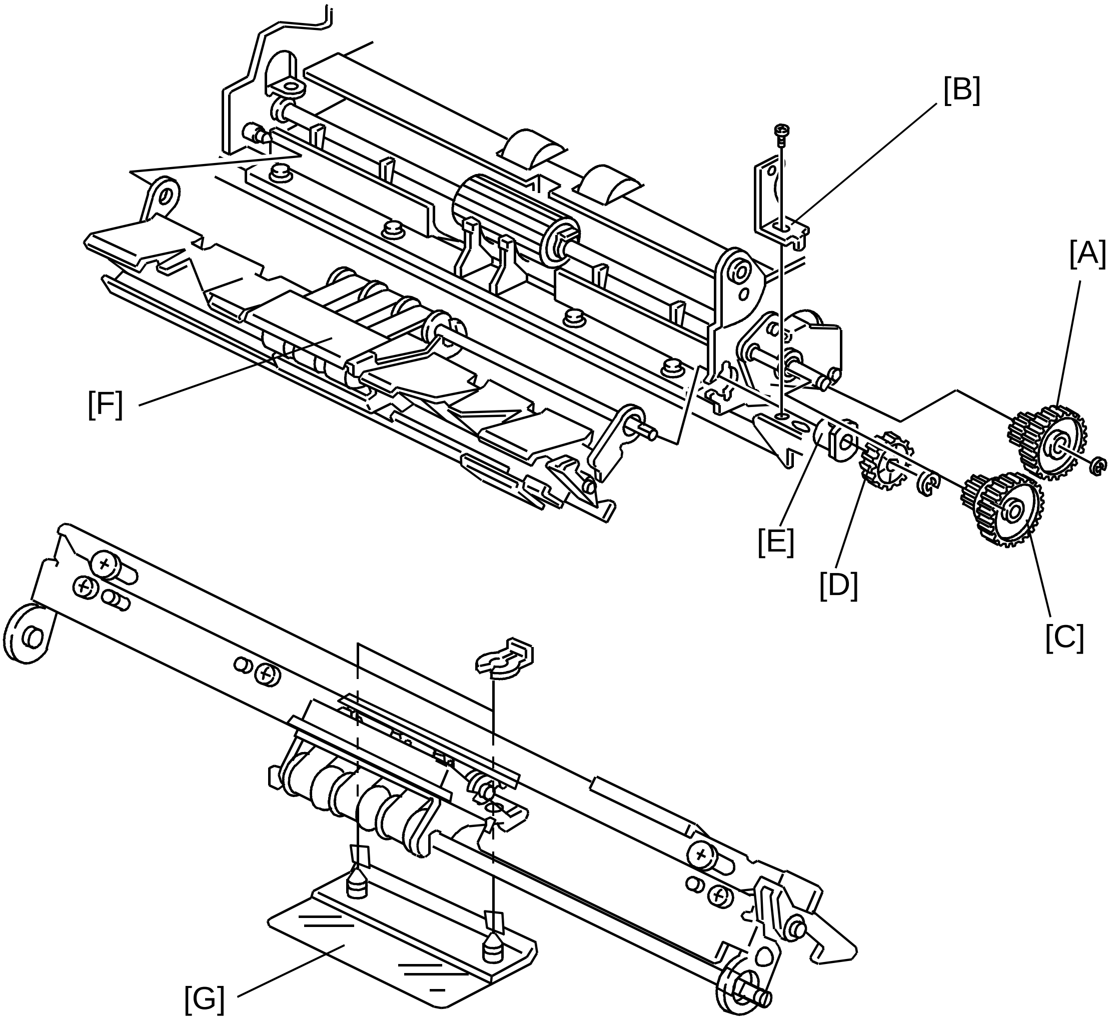


1. Open the front doors and draw out the duplex unit.
2. Remove the duplex front cover [A] (3 screws).
3. Slide the lever [B] to the rear then open the duplex reverse assembly [C].
4. Remove the lower separation guide plate [D] (2 screws).
5. Remove the snap ring [E].

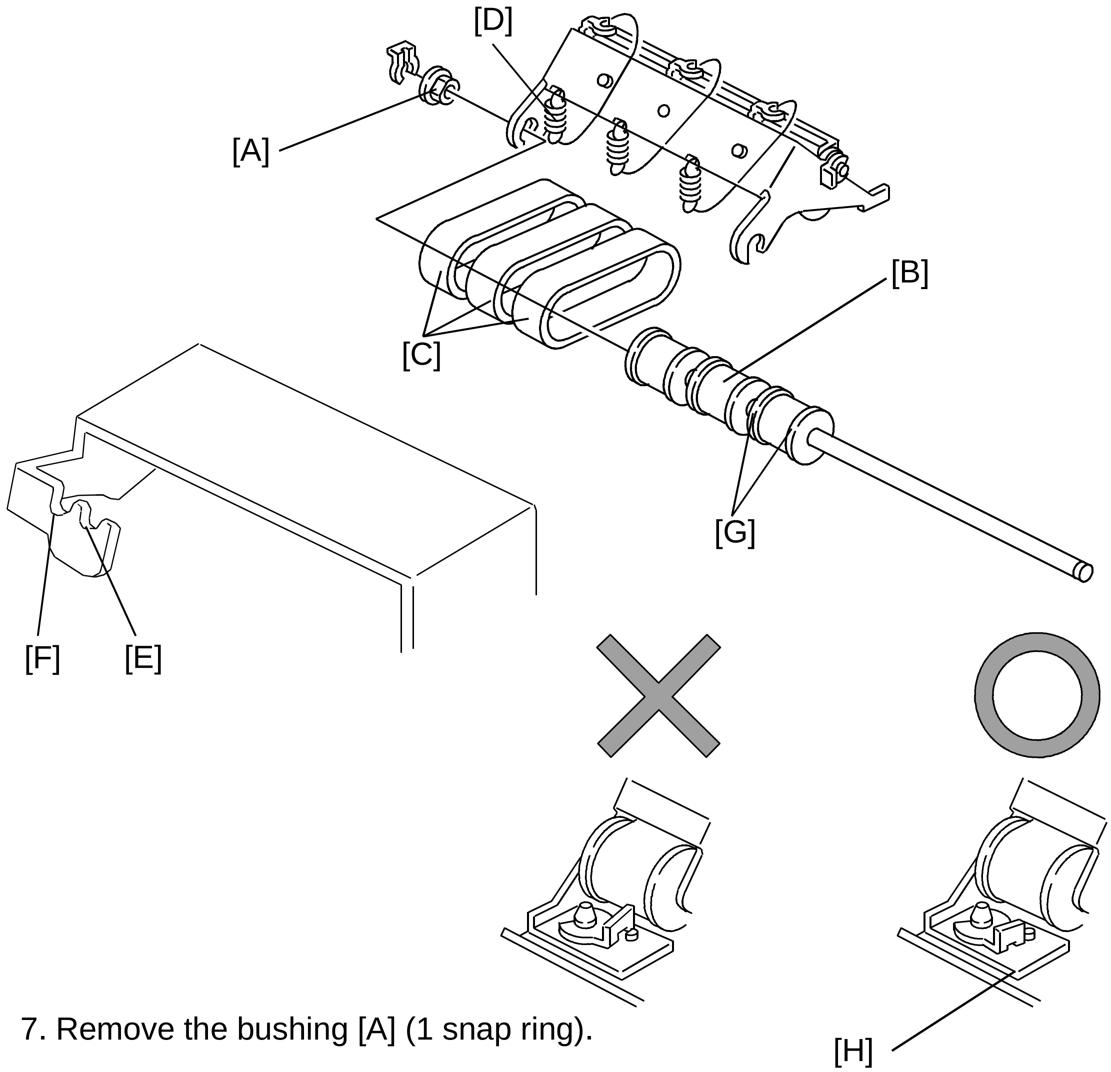


6. Remove the harness bracket [A] (1 screw).
7. Remove the gear [B] (1 E-ring).
8. Remove the bushing [C] (1 E-ring).
9. Slide the feed roller shaft [D] to the rear then slide the feed roller [E] to the front and replace it as shown.

8.2 SEPARATION BELTS REPLACEMENT



1. Open the front doors and draw out the duplex unit.
2. Remove the gear [A] (1 E-ring).
3. Remove the bracket [B] (1 screw) then remove the gear [C].
4. Remove the gear [D] and the bushing [E] (1 E-ring).
5. Remove the separation belt unit [F].
6. Remove the guide mylar [G] (2 snap rings).



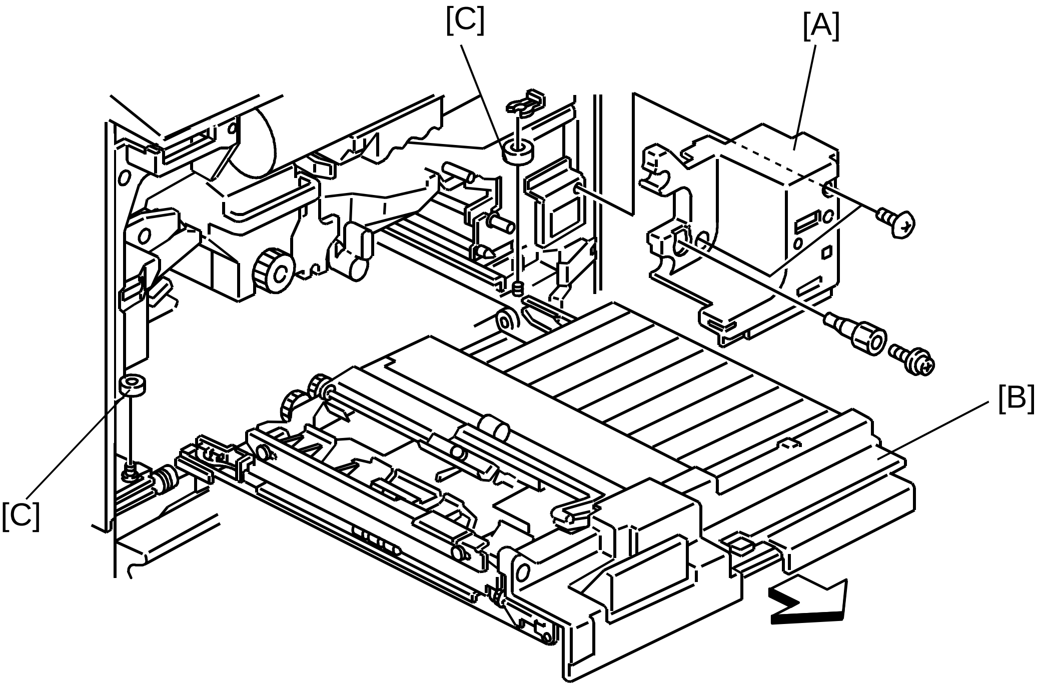
7. Remove the bushing [A] (1 snap ring).

8. Remove the drive roller [B].

9. Replace the three separation belts [C] as a set.

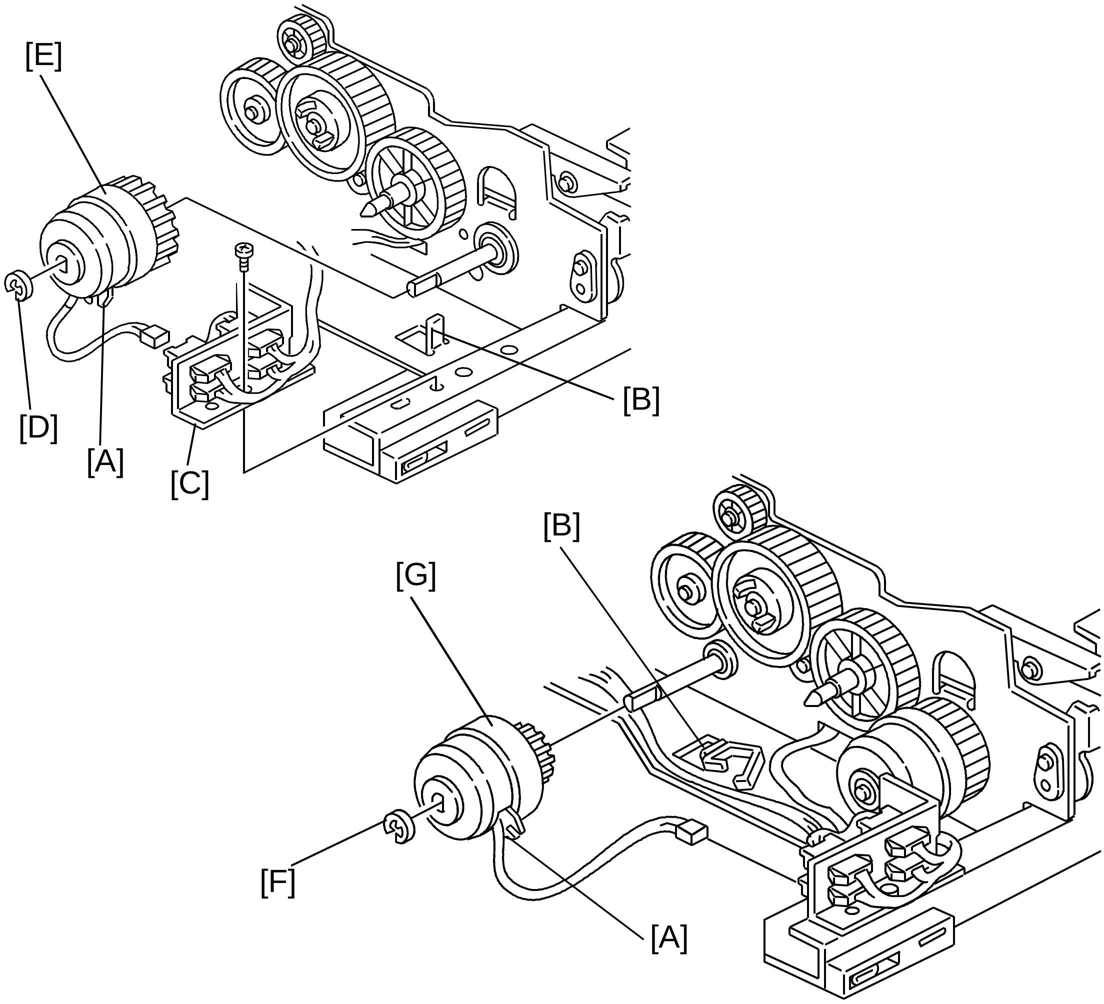
NOTE: When setting the tension spring [D], set it on the hook [E] normally. The hook [F] applies higher separation pressure.
Confirm that the separation belt is correctly set between the guides [G].
Confirm that the snap rings [H] do not touch the separation belts.

8.3 DUPLEX UNIT REMOVAL



1. Open the front doors and remove the left door.
2. Remove the right inner cover [A]. (Refer to the right inner cover removal.)
3. Draw out the duplex unit [B] until the stop position.
4. Take out the right and left stopper pulleys [C] (1 snap ring each).
5. Take out the duplex unit.

8.4 SEPARATION CLUTCH/TRANSPORT CLUTCH REMOVAL



Before replacing both clutches, take out the duplex unit. (Refer to Duplex Unit Removal.)

NOTE: When installing both clutches, be sure to set the stopper [A] to the projection [B].

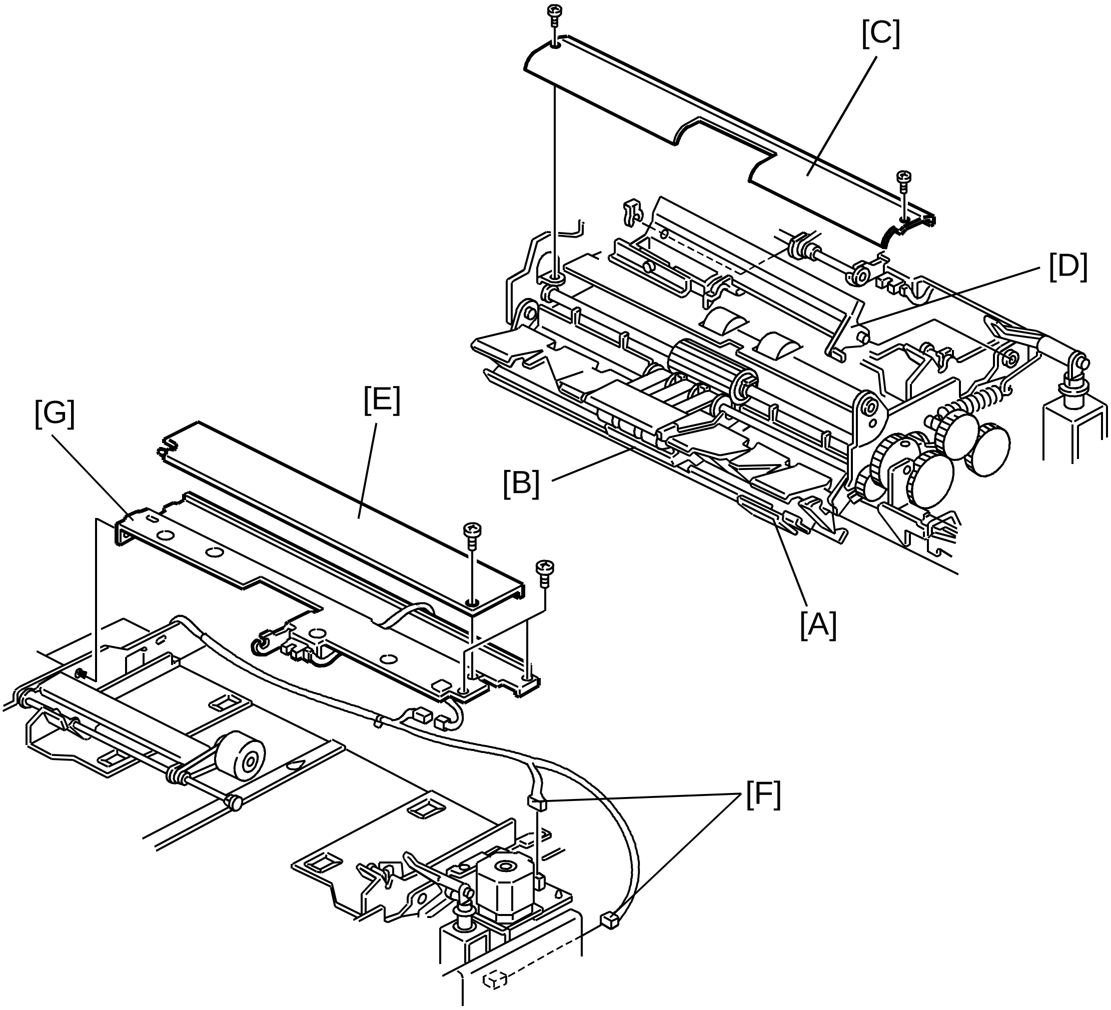
- Separation Clutch -

1. Remove the harness bracket [C] (1screw).
2. Remove the E-ring [D].
3. Replace the separation clutch [E].

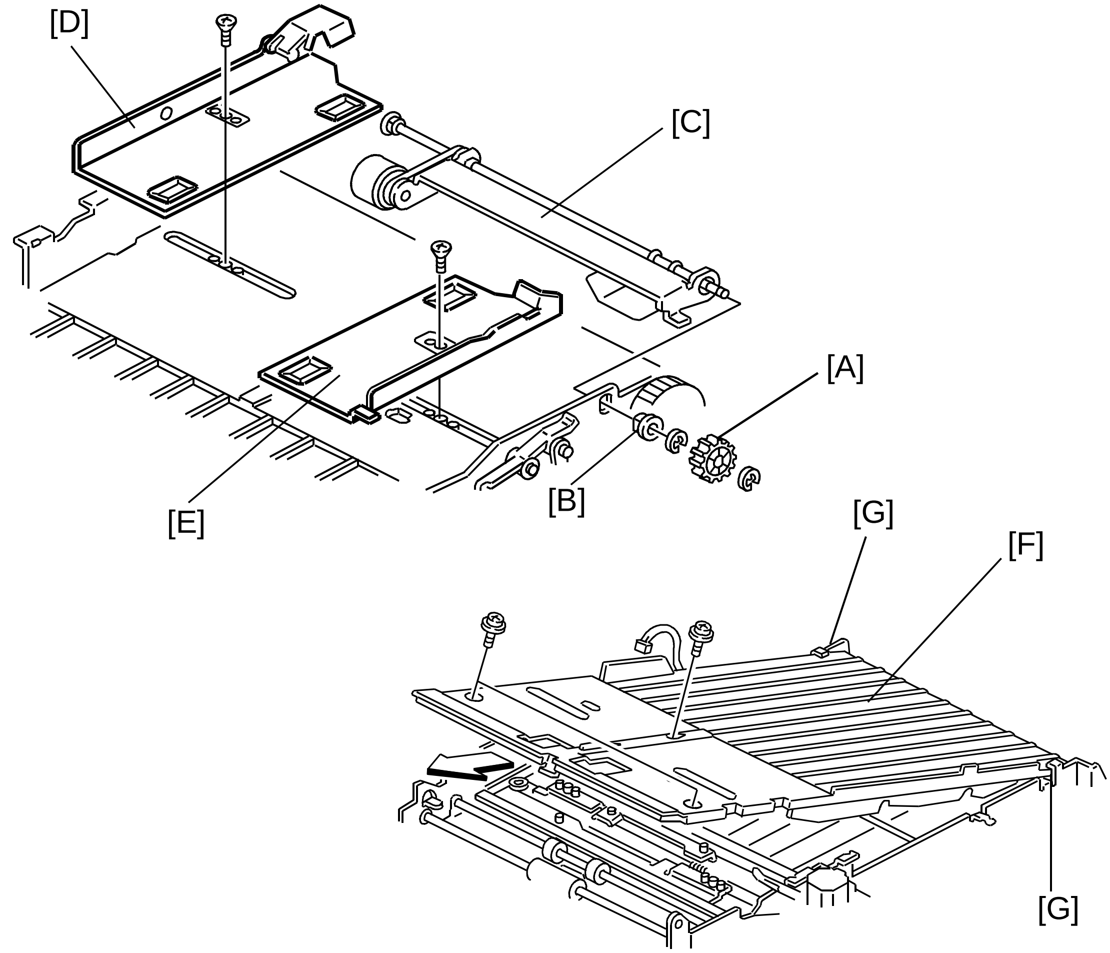
- Transport Clutch -

1. Remove the E-ring [F].
2. Replace the separation clutch [G].

8.5 JOGGER MOTOR REPLACEMENT

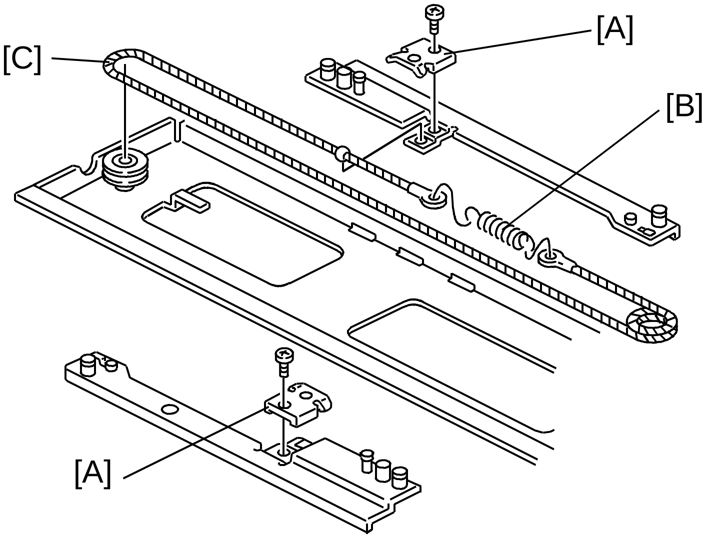


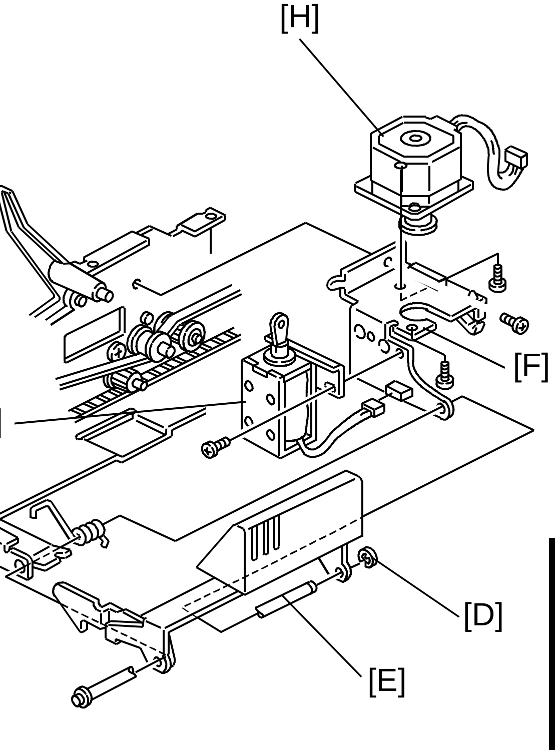
1. Take out the duplex unit. (Refer to the duplex unit removal.)
2. Remove the duplex front cover (3 screws).
3. Slide the lever [A] to the rear then open the separation belt unit [B].
4. Remove the lower separation guide plate [C] (2 screws).
5. Remove the pressure arm [D] (1 snap-ring).
6. Remove the harness cover [E] (1 screw).
7. Remove the two connectors [F].
8. Remove the upper stay [G] (4 screws, 1 connector).

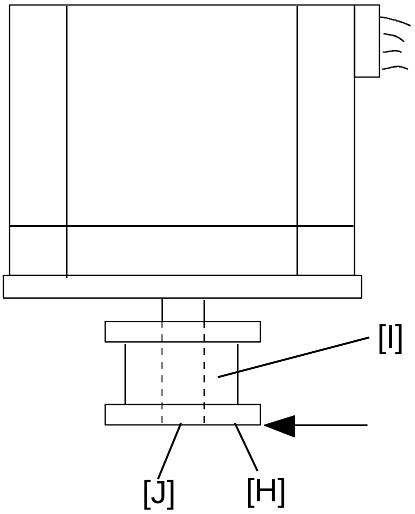


9. Remove the positioning roller drive gear [A] (1 E-ring).
10. Remove the bushing [B] (1 E-ring).
11. Remove the positioning roller assembly [C].
12. Remove the front jogger fence [D] and the rear jogger fence [E] (1 screw each).
13. Remove the duplex tray [F] (3 screws and a connector).

    NOTE: To release the hooks [G], slide the duplex tray to the upper left as shown.







14. Remove the drive wire stoppers [A].

15. Unhook the tension spring [B] and remove the drive wire [C].

16. Remove the E-ring [D] and slide the shaft [E] to the left.

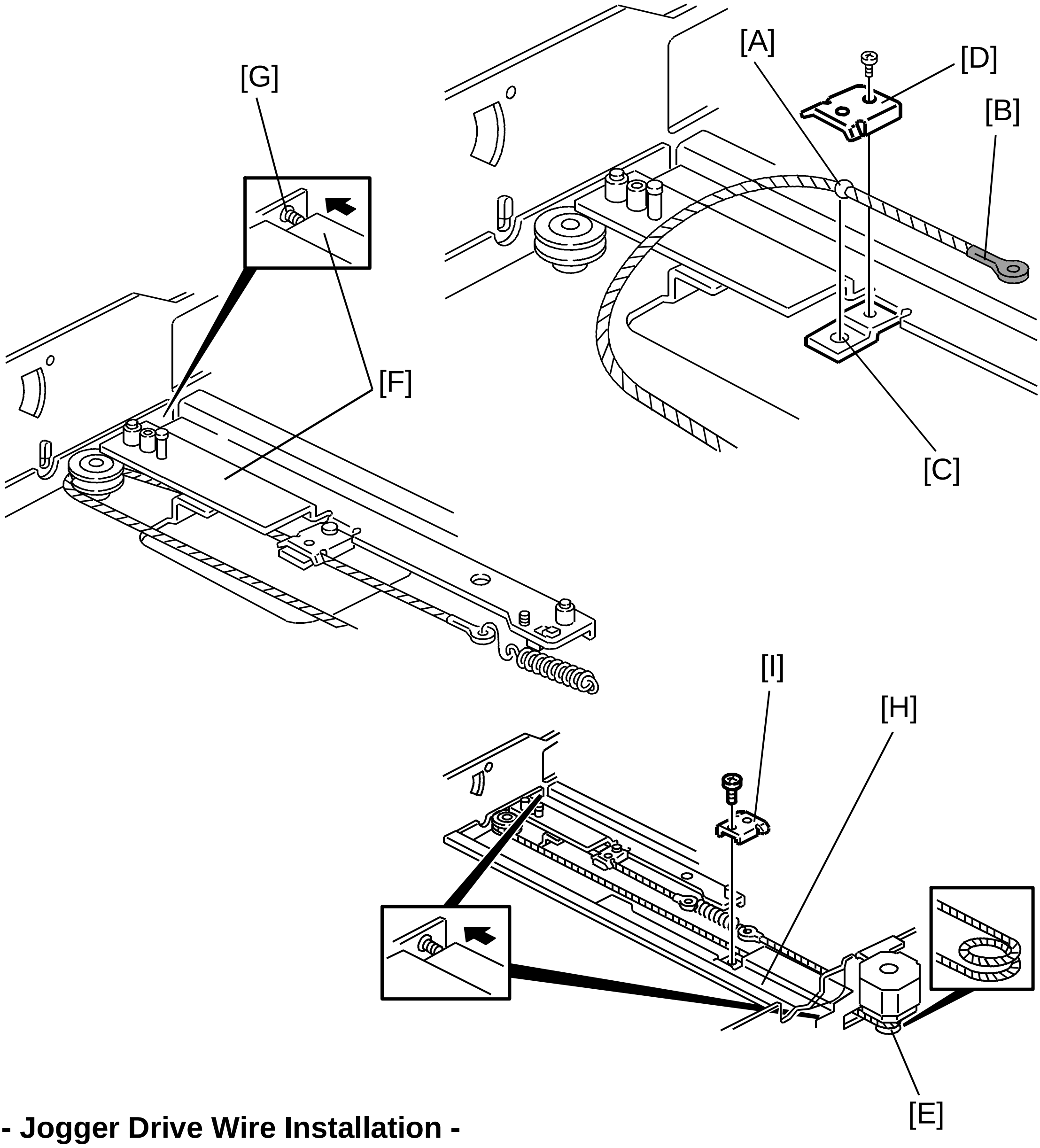
17. Remove the jogger motor bracket [F] (1 screw).

18. Remove the pressure arm solenoid [G] (1 screw).

19. Replace the jogger motor [H] (2 screws).

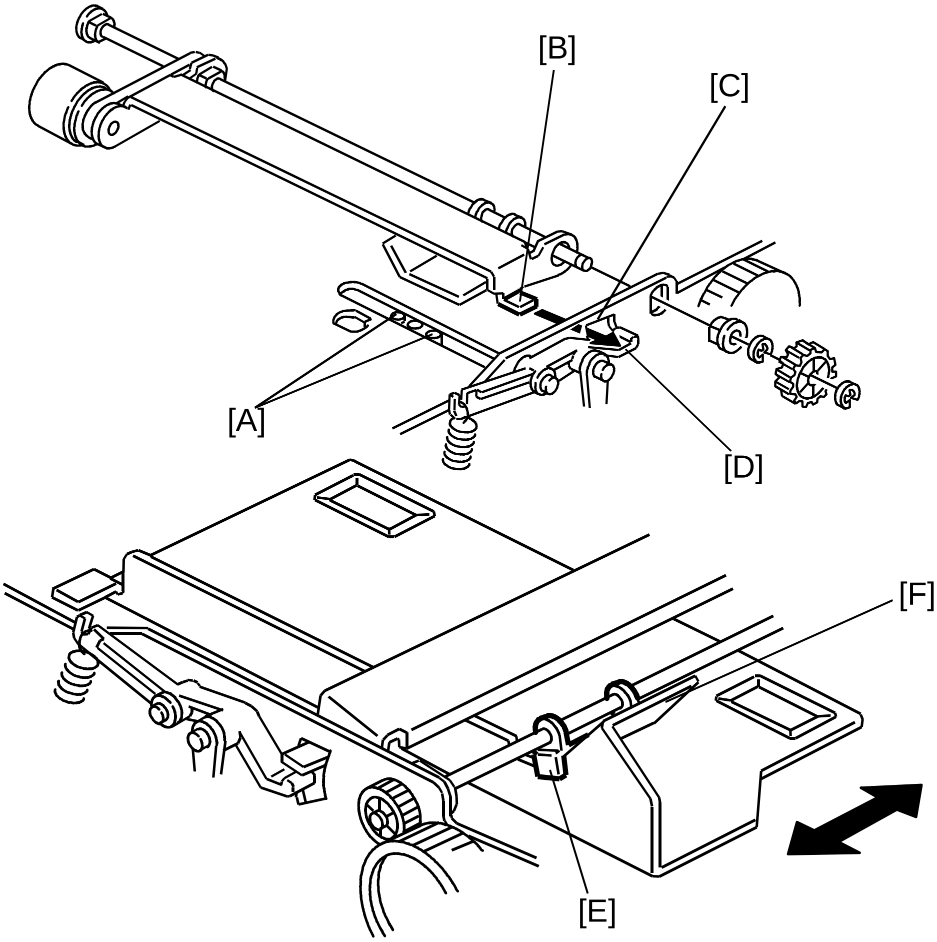
    NOTE: When installing the drive pulley [I] to the jogger motor shaft, align the shaft head [J] with the pulley head [H].

20. Re-assemble the duplex unit.



- Jogger Drive Wire Installation -

1) Set the bead [A] which is closer to the red colored hook [B] in the hole [C] and install the stopper [D] (1 screw).
2) Round the drive wire twice around the drive motor pulley [E] as shown.
3) Move the rear jogger fence bracket [F] to the rear end position (until the bracket [F] touches the screw [G]) and keep this condition.
4) Under the above condition, place the front jogger fence bracket [H] to the front end position (until the bracket [H] touches the front screw).
5) Install the stopper [I] to fix the front jogger fence bracket with the wire.



NOTE: 1) When installing the jogger fences, confirm if the two positioning pins [A] are correctly set in the two holes on the side fences after the screw is set.

2) When installing the positioning roller assembly, insert the plate [B] in the hole [C] on the rear frame, then set the plate on the lever [D].

3) When installing the rear paper press mylar, set the hook [E] to the rear jogger fence [F] as shown so that the mylar moves together with the jogger fence [F].

4) After installing the jogger fences, manually move the jogger fences [F] to confirm that they move smoothly.

5) After re-assembling the duplex unit, manually pull the plungers of the positioning roller solenoid and the pressure arm solenoid to confirm that the positioning roller assembly and the pressure arm move up and down correctly.

6) After re-assembling the duplex unit, adjust the jogger fence width so that the distance between both side fences become 1mm wider than the paper size, when paper is set on the duplex tray. ($\boxed{1}$ SP adjustment mode – PAGE 10.)

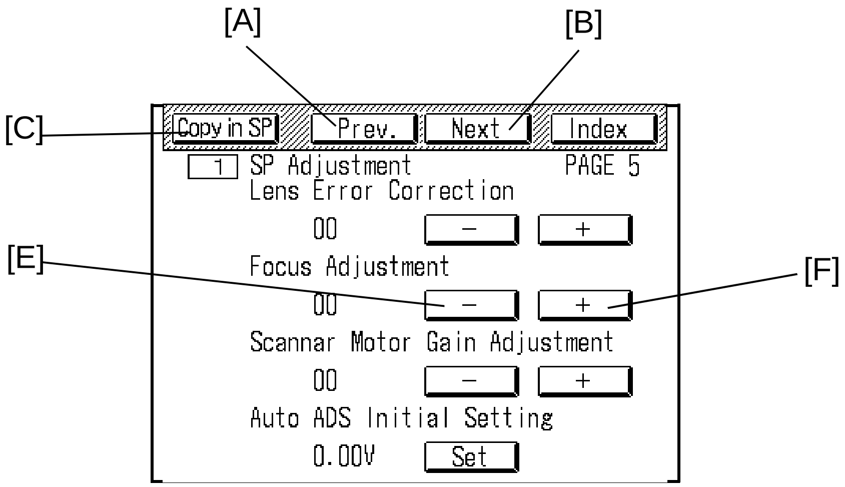
8.6 COPY QUALITY ADJUSTMENT

8.6.1 SP Adjustment Mode

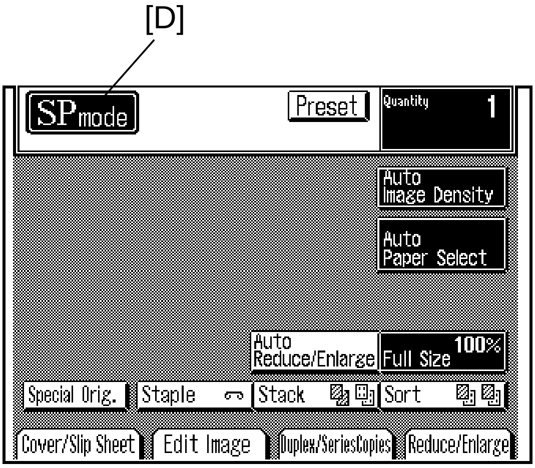
The copy quality adjustments in the table below can be performed by using the appropriate 1 SP Adjustment mode.

Item	SP Adjustment – PAGE	Standard	Change Amount/1 step	Default
Leading edge registration	3	0 ± 2 mm	0.5 mm	00
Leading edge erase margin	3	3.5 ± 2.5 mm	0.5 mm	00
Vertical magnification	3	100 ± 1%	0.1%	00
Horizontal magnification	3	100 ± 1%	0.1%	00
Side to side registration	4	0 ± 2 mm	0.1%	00
Focus in full size	5	—	0.1%	00
Focus in enlarge/ reduce (Lens error correction)	5	—	0.1%	00

NOTE: When performing multiple adjustments, perform the items in order from top to bottom.
Perform each adjustment as explained in the next pages.

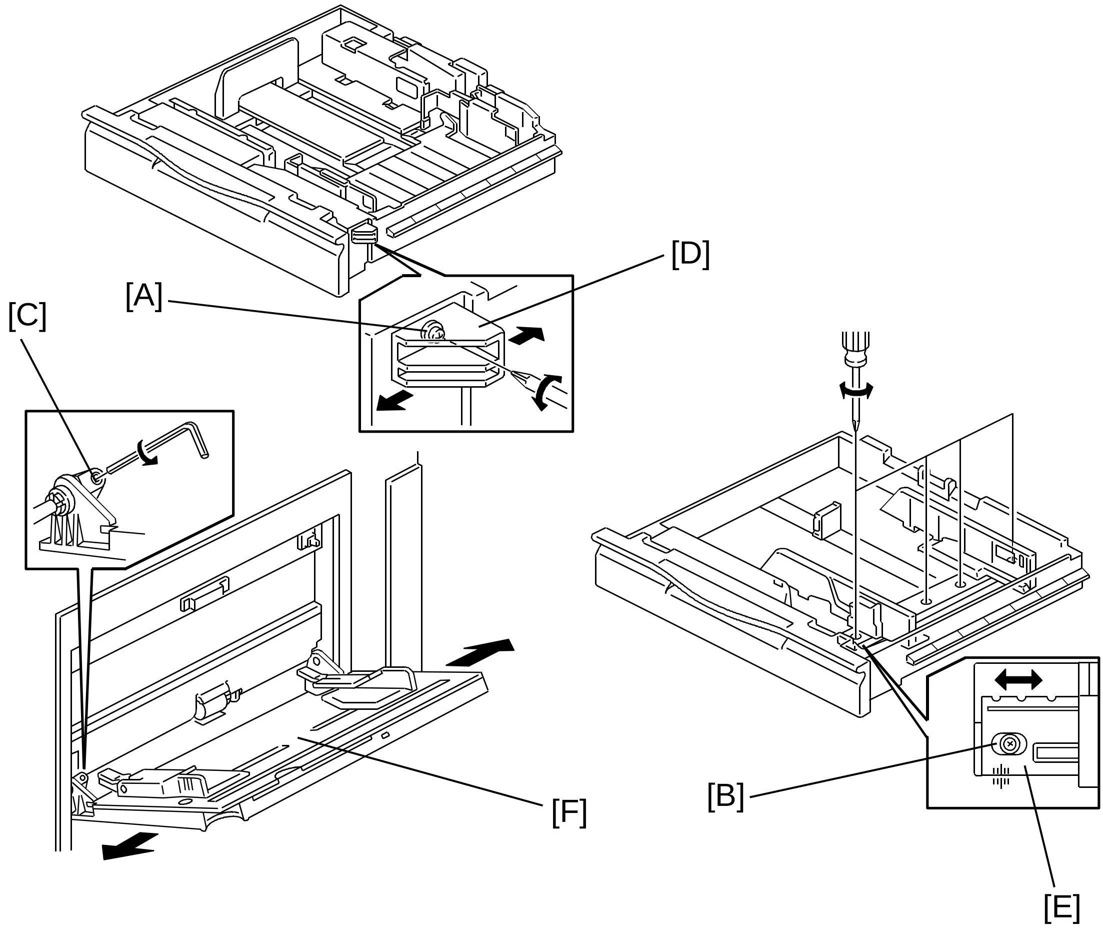

[A]
[B]
[C]
[E]
[F]
Copy in SP
Prev.
Next
Index
−
+
Set

1 SP Adjustment PAGE 5
Lens Error Correction
00
Focus Adjustment
00
Scannar Motor Gain Adjustment
00
Auto ADS Initial Setting
0.00V


[D]
SPmode
Preset
Quantity 1
Auto Image Density
Auto Paper Select
Auto Reduce/Enlarge
Full Size 100%
Special Orig.
Staple
Stack
Sort
Cover/Slip Sheet
Edit Image
Duplex/SeriesCopies
Reduce/Enlarge

1. Enter SP mode (refer to Service Program Access Procedure) and access $\boxed{1}$ SP Adjustment mode.
2. Access the appropriate page by touching the "Prev." [A] or "Next" [B] key.
3. Touch the "Copy in SP" key [C] then select the proper copy mode.
4. Make a copy of the OS-A3 chart.
5. Confirm if copy quality is within the adjustment standard.
6. If the copy quality is not correct, touch the "SP Mode" key [D] at the left upper corner of the LCD panel.
7. Touch the – key [E] or the + key [F] to change the data, then repeat steps 3 to 6 until the copy quality becomes within the adjustment standard.
8. Exit the SP mode.

8.6.2 Side-to-side Registration Adjustment



– Rough Adjustment –

1. Loosen the screws [A] for the tandem tray or built-in LCT, [B] for 550 sheets fixed tray or universal tray, or [C] for by-pass feed tray.
2. Move the tray position by moving parts [D], [E] and [F] of the trays.

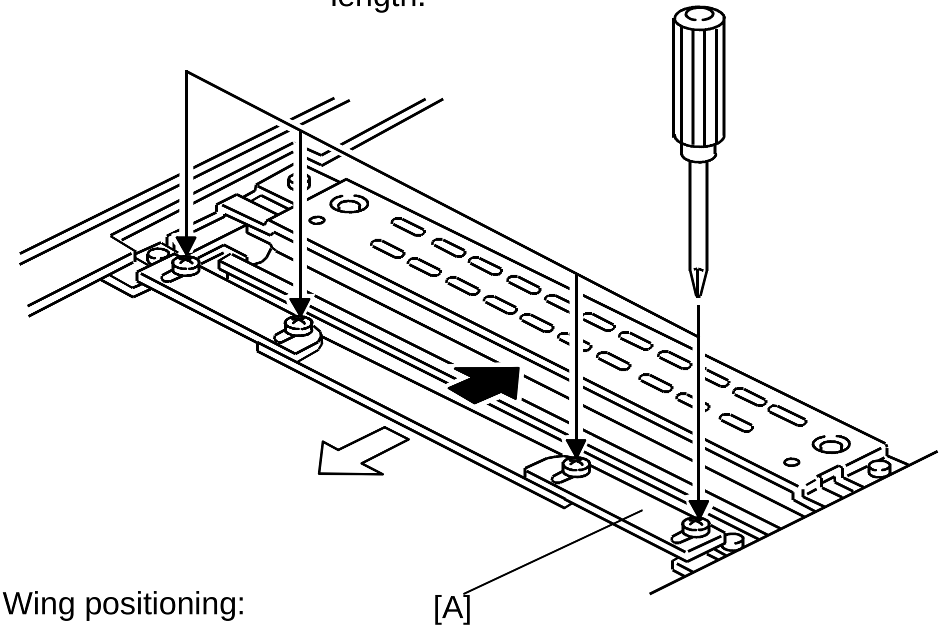
– Fine Adjustment –

1. Enter SP mode (refer to the service program access procedure) and access the side to side registration adjustment mode (1 SP Adjustment – PAGE 4).
2. Adjust side-to-side registration for each feed station by changing the SP mode data.

   NOTE: Copies can be made in SP mode. Touch "Copy in SP" key to select the paper feed station.
   Adjustment standard: Less than ± 2 mm difference between original and copy.

8.6.3 Uneven Exposure Adjustment

When:	If the exposure is uneven.
Purpose:	To maintain even exposure.
Adjustment standard:	The side-to-side variation of the gray scales on the test chart should be less than one level.
How:	Change the position of the exposure lamp or exposure adjustment wings to make light intensity from the exposure lamp even across its length.



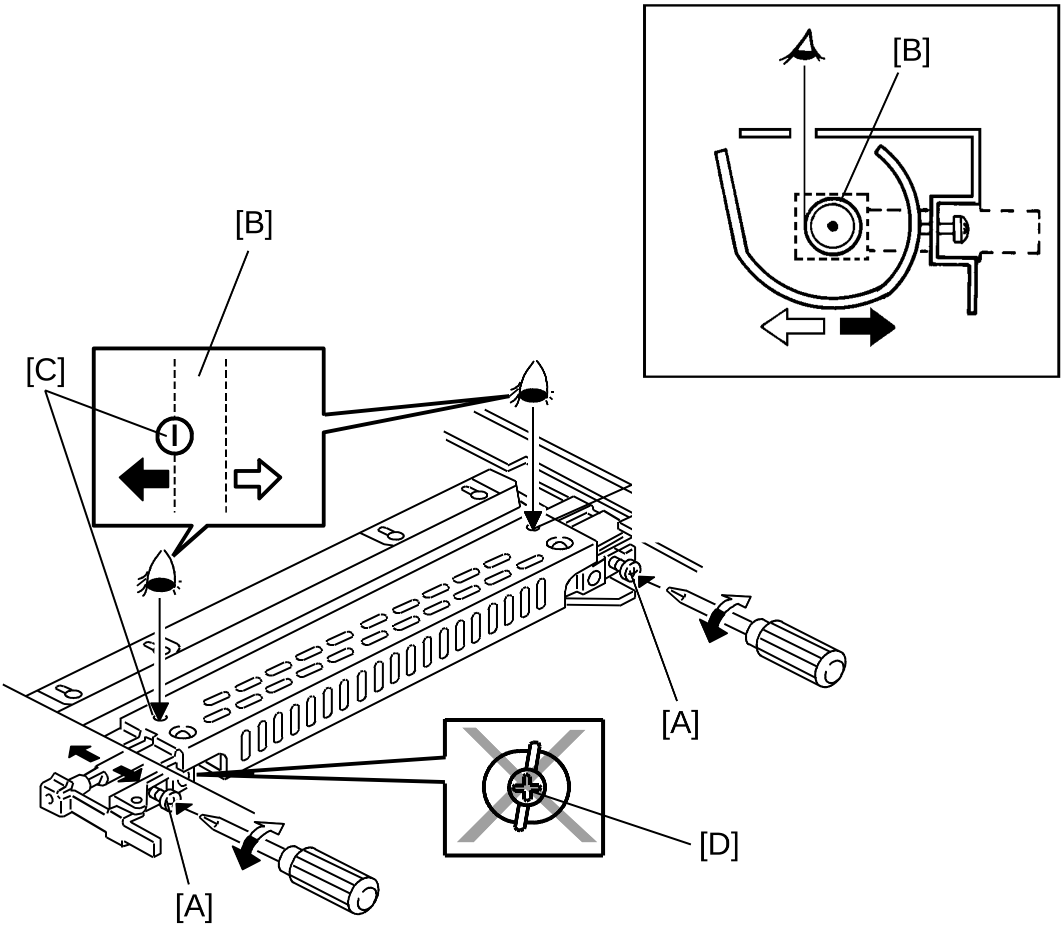
Wing positioning:

➡ Image turns darker.

⇨ Image turns lighter.

1. Remove the exposure glass. (See Exposure Glass Removal.)
2. Position the adjustment wings [A] so that the side-to-side copy image density variation is within the adjustment standard.
3. Turn on the main switch and enter SP mode, then perform the process control data initial setting ($\boxed{1}$ SP Adjustment – PAGE 1).

NOTE: If uneven density is not solved by this adjustment, proceed to the steps 4 and 5 in the next page.



4. Turn the screw [A] to correct the position of the filament. The **left edge** of the exposure lamp [B] should be directly beneath the center of the sight hole [C] in the reflector cover.

CAUTION: Do not touch the screw [D].

5. Turn on the main switch and enter SP mode, then perform the process control data initial setting (1 SP Adjustment – PAGE 1).

8.6.4 Image Density Adjustment

When: The copy image density is already adjusted to the standard level at the factory, and process control maintains copy image density until the next PM. If the customer asks you to adjust the image density, it can be done by using the User Tool mode.

Purpose: To adjust the copy image density.

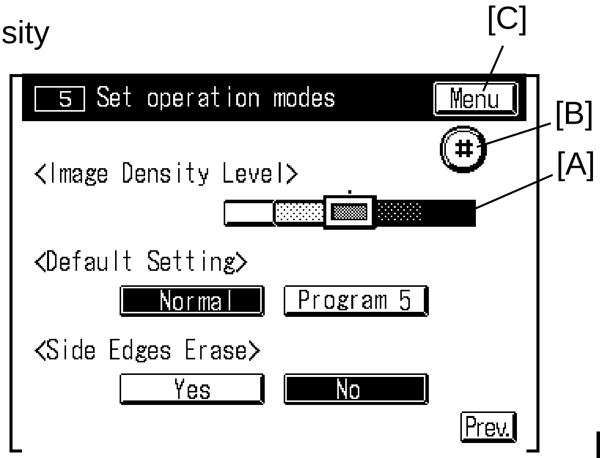
How: The User Tool "image density level" mode changes the development bias voltage.

1. Enter User Tool mode and access 5 Set operation modes.
2. Press the Next key once.
3. Select the appropriate image density level (5 steps).

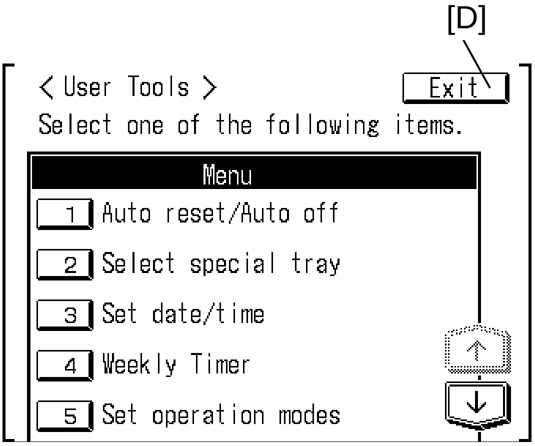
   adjustment:

   1) Press the appropriate ID level key [A].
   2) Press the enter key [B].

4. Press the "Menu" key [C].


[C]
[B]
[A]
5 Set operation modes
Menu
#
<Image Density Level>
<Default Setting>
Normal
Program 5
<Side Edges Erase>
Yes
No
Prev.

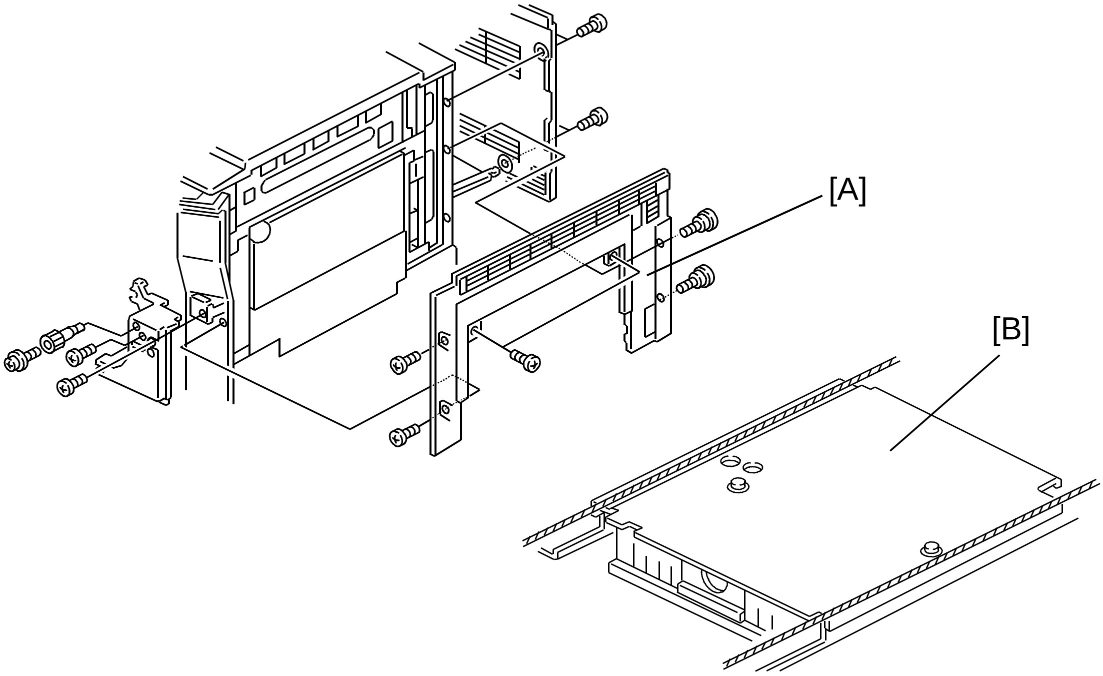
5. Press the "Exit" key [D] to exit User Tool mode.


[D]
< User Tools >
Exit
Select one of the following items.
Menu
1 Auto reset/Auto off
2 Select special tray
3 Set date/time
4 Weekly Timer
5 Set operation modes

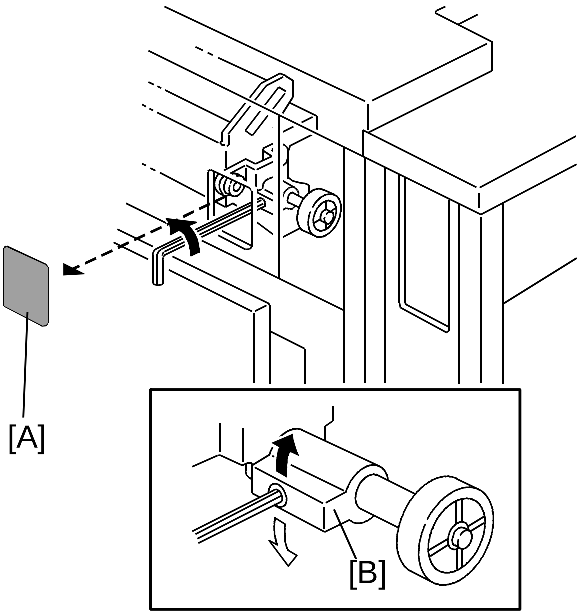
6. Check copy quality.

8.6.5 Scanner Height Adjustment

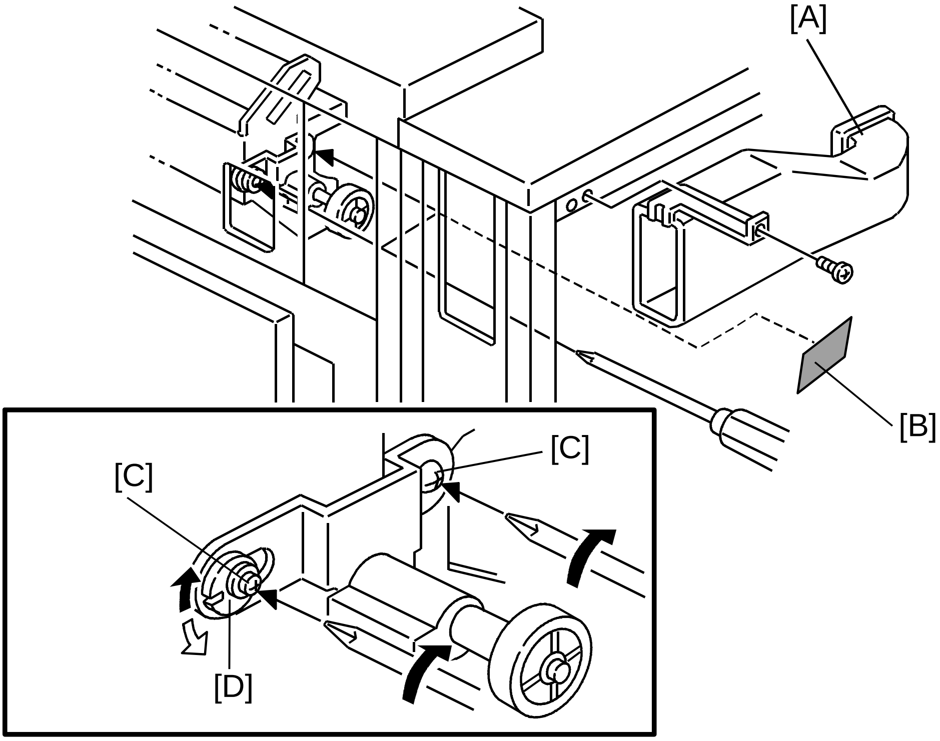
When:	If optically skewed images appear after adjusting the 1st and 2nd scanner positions.
Purpose:	To maintain a proper copy image.
How:	Turn the 3rd scanner height adjusting cam. This changes the 3rd scanner's height.



1. Remove the upper right cover [A]. (Refer to the upper right cover removal.)
2. Remove the lens unit cover [B].
3. Move the third scanner to the far right position.



4. Peel off the cover seal [A].
5. Loosen the Allen screw on the adjusting cam [B].
6. Adjust the third scanner height by turning the adjusting cam. (This is a fine adjustment.)



7. If a fine adjustment is insufficient, make a rough adjustment then make the fine adjustment again.

- Rough adjustment -

1) Remove the air inlet duct [A](1 screw).
2) Peel off the cover seal [B].
3) Loosen the screws [C].
4) Rotate the rough adjustment cam [D], as shown, to adjust the third scanner height.

   Black arrow ---- Raise the rear side

   White arrow ---- Lower the rear side

NOTE: Normally the cut out of the adjustment cam is at nine o’clock.

5) Tighten the screw [C] after the adjustment.

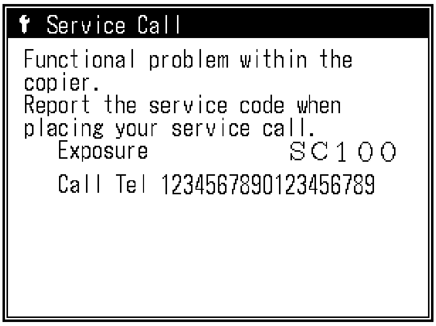
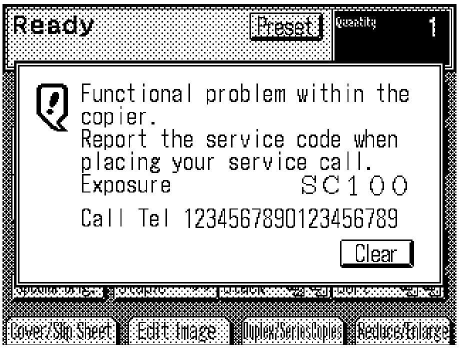
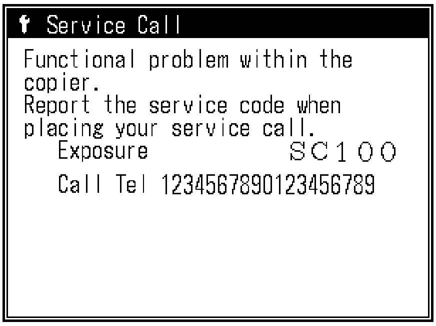
SECTION 6

TROUBLESHOOTING

1. SERVICE CALL CONDITIONS

1.1 SUMMARY

There are 4 levels of service call conditions.

Level	Definition	Display
A	The SC can only be reset by service representative (see note in the next page) to prevent the machine from being damaged. The copier cannot be operated at all.	SC display will not be canceled.  Service Call Functional problem within the copier. Report the service code when placing your service call. Exposure SC100 Call Tel 1234567890123456789
B	The copier can be operated as usual except for the unit related to the service call.	If the related function is selected, this display appears.  Ready Preset Quantity 1 Functional problem within the copier. Report the service code when placing your service call. Exposure SC100 Call Tel 1234567890123456789 Clear Cover/Slip Sheet Edit Image Duplex/Series Copies Reduce/Enlarge
C	Only the SC counter is incremented. The copier can be operated as usual.	SC will not be displayed.
D	The SC can be reset by turning main switch off and on if the SC is caused by misdetection.	 Service Call Functional problem within the copier. Report the service code when placing your service call. Exposure SC100 Call Tel 1234567890123456789

NOTE: 1) If the problem is related to electrical circuit boards, first disconnect then reconnect the connectors before replacing the PCBs.

2) If the problem is related to motor lock, first check the mechanical load before replacing motors or sensors.

3) To reset the SC of "Level: A", enter SP mode then turn off and on the main switch.

4) When an SC condition occurs while in SP mode, the display does not indicate the SC number. You can recognize the SC condition because in this condition, you cannot exit the SP mode by touching the Quit key.
If this occurs, confirm the SC number as follows:

1. Perform the same procedure to duplicate the SC condition.
2. Enter "Copy in SP" mode. You can see the SC number on the display. You can also confirm the SC number by checking the increment of the SP mode SC counter (6 Jam/SC Counter – PAGE 1).

1.2 EXPOSURE

SC101 - Exposure lamp malfunction - abnormal On/Off

Definition: [level: A]

During the lamp off condition, the optics control board detects a lamp voltage.

Possible causes

- Exposure lamp open
- Triac shorted
- Exposure lamp thermoswitch open
- Optics control board defective

SC103 - Power source frequency detection error

Definition: [level: D]

Detects frequencies out of the 45Hz to 65Hz range.

Possible causes:

- Abnormal power source
- Electrical noise
- AC drive board defective
- Optics control board defective

SC104 - Exposure lamp malfunction - abnormal off

Definition: [level: D]

The scanner start signal is received even if the main relay off condition is detected.

Possible causes:

- Main relay defective
- Communication error between the main control board and the optics control board because of a poor harness connection.
- Optics control board defective

1.3 SCANNER

SC120 - Scanner home position sensor abnormal - stays off

Definition: [level: D]

The scanner home position sensor does not detect the on condition even if the scanner returns home.

Possible causes:

- Scanner home position sensor defective
- Optics control board defective

SC121 - Scanner home position sensor abnormal - stays on

Definition: [level: D]
The scanner home position sensor does not detect the off condition even if the scanner leaves the scanner home position sensor by 120 mm.

Possible causes:
- Scanner home position sensor defective
- Scanner motor defective
- Scanner HP sensor short

SC125 - Low scanner speed

Definition: [level: D]
The scanner speed, detected by the optics control board through the encoder, is lower than the specified speed.

Possible causes:
- Scanner drive motor defective
- Optics Control Board defective

SC126 - High scanner speed

Definition: [level: D]
The scanner speed, detected by the optics control board through the encoder, is higher than the specified speed.

Possible causes:
- Scanner drive motor defective
- Optics control board defective

SC127 - Scanner drive motor encoder failure

Definition: [level: D]
Scanner rotating direction detected by the optics control board through the encoder is opposite to the specified direction.

Possible causes:
- Scanner drive motor defective
- Optics control board defective

1.4 LENS MAGNIFICATION

SC140 - Lens vertical home position sensor abnormal - stays off

Definition: [level: D]

When the lens returns to the home position, the lens vertical home position sensor does not detect the on condition for 2 seconds or more, and more than twice.

Possible causes:

- Lens vertical home position sensor shorted
- Lens vertical drive motor defective
- Optics control board defective

SC141 - Lens vertical home position sensor abnormal - stays on

Definition: [level: D]

When the lens returns to the home position, the lens vertical home position sensor does not detect the off condition for 3.5 seconds or more, and more than twice.

Possible causes:

- Lens vertical home position sensor open
- Lens vertical drive motor defective
- Optics control board defective

SC142 - Lens horizontal home position sensor abnormal - stays off

Definition: [level: D]

When the lens returns to the home position, the lens horizontal home potion sensor does not detect the on condition for 1.7 seconds or more, and more than twice.

Possible causes:

- Lens horizontal home position sensor short
- Lens horizontal drive motor defective
- Optics control board defective

SC143 - Lens horizontal home position sensor abnormal - stays on

Definition: [level : D]
When the lens leaves from the home position, the lens horizontal home potion sensor does not detect the off condition for 2.3 seconds or more, and more than twice.

Possible causes:
- Lens horizontal home position sensor open
- Lens horizontal drive motor defective
- Optics control board defective

SC144 - 3rd scanner home position sensor abnormal - stays off

Definition: [level: D]
When the 3rd scanner returns to the home position, the 3rd scanner home position sensor does not detect the on condition for 1.2 seconds or more, and more than twice.

Possible causes:
- 3rd scanner home position sensor shorted
- 3rd scanner drive motor defective
- Optics control board defective

SC145 - 3rd scanner home position sensor abnormal - stays off

Definition: [level: D]
When the 3rd scanner leaves from the home position the 3rd scanner home position sensor does not detect the off condition for 2.0 seconds or more, and more than twice.

Possible causes:
- 3rd scanner home position sensor open
- 3rd scanner drive motor defective
- Optics control board defective

SC146 - Abnormal magnification operation

Definition: [level: D]
The lens vertical drive motor or the lens horizontal drive motor move for no apparent reason in the ready condition.

Possible causes:
- Lens vertical drive motor defective
- Lens horizontal drive motor defective
- 3rd scanner drive motor defective
- Optics control board defective

1.5 OPTICS THERMISTOR

SC190 - Optics thermistor open

Definition: [level: D]
The optics thermistor is open.

Possible causes:

- Optics thermistor open

NOTE: When the optics thermistor is shorted, no SC code is indicated. The exhaust fan rotates quickly and continuously.

SC191 - Scanner motor thermistor open

Definition: [level: D]
The scanner motor thermistor is open.

Possible causes:

- Scanner drive motor defective

1.6 MAIN CHARGE

SC302 - Charge corona leakage

Definition: [level: D]
The charge power pack detects a charge corona leakage (output: 0V) for 4.8 msec, or detects the output to be more than 7 kV, 10 times in one job.

Possible causes:

- Main charge corona unit defective
- Main charge power pack defective
- High voltage control board defective

SC303 - Charge corona wire cleaner failure

Definition: [level: C]
The current of the charge corona wire cleaner drive motor is over the specified current within 4 seconds after the cleaner motor starts.
The charge corona wire cleaner does not move back to the end block within 30 seconds.

Possible causes:

- Charge corona wire cleaner drive motor defective
- Insufficient lubrication for the charge corona wire cleaner drive mechanism (G501 grease)
- High voltage control board defective

1.7 DEVELOPMENT

SC341 - Development motor locked

Definition: [level: D]
Development motor lock signal stays low more than 1 second in development motor on condition.

Possible causes:
- Extra load in the development unit
- Development motor defective
- Main control board defective

SC342 - Toner collection motor locked

Definition: [level: D]
The toner collection sensor output does not change (OFF → ON or ON → OFF) for more than 2.55 seconds in the toner collection motor on condition.

Possible causes:
- Toner collection sensor defective
- Toner collection motor defective
- Toner clog in the toner collection pipe

SC343 - Toner collection bottle at improper position

Definition: [level: D]
Toner bottle set switch is off and the front door is closed.

Possible causes:
- Toner collection bottle set switch defective
- Toner collection bottle is set incorrectly

1.8 PROCESS SENSOR

SC351 - Abnormal Vsg Detection (Vsg > 4.2V)

Definition: [level: C]
The detected Vsg value is over 4.2 V.

Possible causes:
- ID sensor defective
- Main control board defective

SC352 - Incomplete TD sensor initial setting

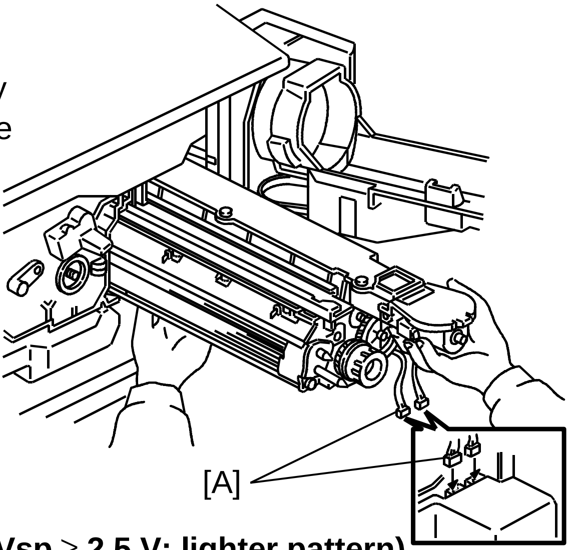
Definition: [level: C]

The output voltage of the TD sensor is higher than 2.6 V or lower than 2.4 V during the developer initial setting mode.

VOUT to get 2.5 V for the TD sensor output is higher than 10 V or lower than 2 V.

Possible causes:

- Connector [A] not set correctly
- Toner density sensor defective
- Abnormal toner concentration



SC353 - Abnormal Vsp Detection (Vsp ≥ 2.5 V: lighter pattern)

Definition: [level: C]

Vsp is 2.5 V or higher.

Possible causes:

- ID sensor defective
- OPC drum
- High voltage control board defective
- Poor contact of the development bias terminal

SC354 - Abnormal Vsg detection (Vsg ≤2.5 V)

Definition: [level: C]

Vsg is 2.5 V or less.

Possible causes:

- ID sensor defective
- OPC drum
- Dirty charge corona casing
- Quenching lamp defective
- Erase lamp defective
- Cleaning blade defective
- Dirty ID sensor

SC355 - Abnormal VTD detection (VTD ≥ 4 V)

Definition: [level: C]
VTD is 4 V or higher.

Possible causes:

- Toner density sensor defective
- Toner concentration too low

SC356 - Abnormal VTD detection (VTD < 0.5 V)

Definition: [level: C]
VTD is less than 0.5 V.

Possible causes:

- Toner density sensor defective
- Toner concentration is too high

SC357 - Abnormal Vsp detection (Vsp/Vsg ≥ 25%)

Definition: [level: C]
Vsp/Vsg is 25% or higher.

Possible causes:

- ID sensor defective
- OPC drum
- Dirty ID sensor

SC358 - Abnormal Vsp detection (Vsp/Vsg < 2.5%)

Definition: [level: C]
Vsp/Vsg is less than 2.5%.

Possible causes:

- ID sensor defective
- OPC drum
- Toner scattering

SC361 - Incomplete drum potential sensor calibration

Definition: [level: C]

When the process control initial setting is performed and a development bias of -100 V or -800 V is applied to the drum shaft, the drum potential voltage is out of these ranges:

$0.1 \leq V\text{-}100 \leq 0.7$ [V] or $2.7 \leq V\text{-}800 \leq 4.2$ [V].

Possible causes:

- Drum potential sensor defective
- High voltage control board defective
- Drum shaft terminal not grounded
- OPC drum
- Main charge corona unit defective

SC364 - Abnormal V_D detection

Definition: [level: C]

V_D is out of specification ($V_R + 770 \pm 20$ V).

Possible causes:

- Drum potential sensor defective
- OPC drum
- Main charge corona unit defective

SC365 - Abnormal V_L detection

Definition: [level: C]

V_L is out of specification ($V_R + 140 \pm 20$ V).

Possible causes:

- Drum potential sensor defective
- OPC drum
- Main charge corona unit defective
- Optics too dirty

1.9 TRANSFER CURRENT

SC402 - Transfer current leakage

Definition: [level: D]
When the transfer power pack output voltage exceeds 4.5 KV for 200 msec or more, the output current is multiplied by 0.8. If this condition occurs 11 time in a row, an SC is displayed.

Possible causes:
- Transfer belt defective
- Transfer power pack defective
- Poor contact at transfer bias roller, discharge plate terminals
- High voltage control board defective

1.10 DRUM

SC440 - Abnormal main motor speed

Definition: [level: D]
Lock signal stays low in the main motor on condition for 1.0 second or more.

Possible causes:
- Main motor defective

SC442 - Drum thermistor open

Definition: [level: D]
The drum thermistor is open.

Possible causes:
- Drum thermistor defective

1.11 PAPER FEED

SC500 - Abnormal manual feed drive motor speed

Definition: [level : D]
Lock signal stays low in the manual feed motor on condition for 1.0 second or more.

Possible causes:
- Manual feed motor defective

SC501 - Abnormal paper feed drive motor speed

Definition: [level: D]
Lock signal stays low in the paper feed motor on condition for 1.0 second or more.

Possible causes:
- Paper feed motor defective
- Paper feed control board defective

SC502 - Abnormal 1st lift motor movement

Definition: [level: B]
The 1st lift sensor detects high condition for 10 seconds or more after the 1st lift motor starts. The first time, after the paper tray is opened and closed, the 1st lift motor starts again. If the above condition occurs twice, this SC is displayed.

Possible causes:
- 1st lift sensor shorted
- 1st lift motor defective
- Paper feed control board defective

SC503 - Abnormal 2nd lift motor movement

Definition: [level: B]
The 2nd lift sensor detects the high condition for 10 seconds or more after the 2nd lift motor starts. The first time, after the paper tray is opened and closed, the 2nd lift motor starts again. If the above condition occurs twice, this SC is displayed.

Possible causes:
- 2nd lift sensor shorted
- 2nd lift motor defective
- Paper feed control board defective

SC504 - Abnormal 3rd lift motor (1.5 K LCT motor for A096 copier) movement

Definition: [level: B]

The 3rd lift sensor detects the high condition for 10 seconds or more after the 3rd lift motor starts. The first time, after the paper tray is opened and closed, the 3rd lift motor starts again. If the above condition occurs twice, this SC is displayed.

Possible causes:

- 3rd lift sensor shorted
- 3rd lift motor (1.5 K LCT motor for A096 copier) defective
- Paper feed control board defective

SC506 - Abnormal 3.5 K LCT motor movement

Definition: [level: B]

The LCT lift sensor detects the low condition for 10 seconds or more after the LCT motor starts. The first time, after the LCT cover is opened and closed, the LCT motor starts again. If the above condition occurs twice, this SC is displayed.

Possible causes:

- LCT motor defective
- LCT lift sensor shorted

SC507 - Abnormal 3.5 K LCT feed motor movement

Definition: [level: B]

The LCT feed motor is locked for 1 second or more after this motor starts.

Possible causes:

- LCT feed motor defective

SC508 - Abnormal tandem rear fence drive motor movement

Definition: [level: B]

It takes 10 seconds or more for the rear fence return sensor to detect the on condition after the rear fence drive motor starts.

It takes 10 seconds or more for the rear fence home position sensor to detect the on condition after this fence starts moving to the home position.

When the tray is set, the rear fence return sensor and the rear fence the home position sensor are on.

Possible causes:

- Rear fence drive motor defective
- Rear fence HP sensor defective
- Rear fence return sensor defective

SC510 - Abnormal tandem side fence home position detection - stays off

Definition: [level: B]
When the side fence goes back to the home position or the side fence drive motor works to open the fence, the side fence positioning sensor does not detect the on condition for 5 seconds or more.

Possible causes:
- Side fence drive motor defective
- Side fence positioning sensor open

SC511 - Abnormal tandem side fence home position detection - stays on

Definition: [level: B]
When the side fence goes back to the home position or the side fence drive motor works to close the fence, the side fence positioning sensor stays on for 5 seconds.

Possible causes:
- Side fence drive motor defective
- Side fence positioning sensor shorted

1.12 DUPLEX

SC520 - Abnormal fusing/duplex drive motor movement

Definition: [level: D]
The lock signal stays low for 1.0 second after the fusing/duplex drive motor starts.

Possible causes:
- Fusing/duplex drive motor defective

SC522 - Abnormal jogger home position sensor detection - stays off

Definition: [level: B]
The jogger home position sensor does not detect the on condition for 5 seconds or more after the fusing/duplex drive motor starts.

Possible causes:
- Jogger motor defective
- Jogger HP sensor open

SC523 - Abnormal jogger home position sensor detection - stays on

Definition: [level: B]

The jogger home position sensor does not detect the off condition for 1 second after its sensor detects the on condition in the initializing mode.

Possible causes:

- Jogger drive motor defective
- Jogger HP sensor shorted

1.13 FUSING

SC541 - Fusing thermistor open

Definition: [level: A]

Detects the fusing thermistor open condition for 2 msec or more after turning the main switch on.

Possible causes:

- Fusing thermistor open
- Optics control board defective

SC542 - Start key stays red

Definition: [level: A]

The fusing temperature does not reach the specified temperature after 5 minutes from turning the main switch on.

Possible causes:

- Fusing lamp defective
- AC Drive board defective
- Fusing thermistor defective

SC543 - Fusing overheat (detected by the main control board)

SC544 - Fusing overheat (detected by the optics control board)

Definition: [level: A]

The fusing temperature stays over 231 °C for 5 seconds.

Possible causes:

- AC drive board defective
- Fusing thermistor defective
- Optics control board defective
- Main control board defective

SC545 - Low fusing temperature (detected by the main control board)
SC546 - Low fusing temperature (detected by the optics control board)

Definition: [level: A]
The fusing temperature stays lower than 100 °C for 5 seconds after the machine becomes ready.

Possible causes:
- Fusing thermistor defective
- AC drive board defective
- Fusing lamp open
- Main control board defective
- Optics control board defective

SC547 - Fusing lamp continuously lit

Definition: [level: A]
Fusing lamp continuously lights for 70 seconds after the machine becomes ready. However, if the door is open, paper jams, or the fusing unit is out of position, the ready condition is canceled and the main relay opens.

Possible causes:
- AC drive board

SC548 - Unstable fusing temperature

Definition: [level: A]
If the fusing temperature changes by 21 °C/second four times in 1 minute, this SC is displayed.

Possible causes:
- AC drive board defective
- Thermistor defective

1.14 SYSTEM CONTROL

SC600 - Communication error (main control board and operation panel)

Definition: [level: D]
The main control board does not communicate with the operation panel.

Possible causes:
- Main control board defective
- Operation panel defective
- Harness defective

SC601 - Communication error (main control board and optics control board)

Definition: [level: D]

The main control board does not communicate with the optics control board.

Possible causes:

- Main control board defective
- Optics control board defective
- Harness defective

SC602 - Communication error (main control board and high voltage control board)

Definition: [level: D]

The main control board does not communicate with the high voltage control board.

Possible causes:

- Main control board defective
- High voltage control board defective
- Harness defective

SC603 - Main control board malfunction (CPU)

Definition: [level: D]

Communication to the main control board is not completed.

Possible causes:

- Main control board defective

SC620 - Communication error (main control board and DJF/RDH main board)

Definition: [level: B]

The main board does not communicate with the DJF/RDH main board.

Possible causes:

- Main control board defective
- DJF/RDH main board defective
- Harness defective
- Fiber optics defective

SC621 - Communication error (main control board and sorter staplers (A374/A377)/finisher main board)

Definition: [level: D]
The main control board does not communicate with the sorter stapler (A374/A377)/finisher main board.

Possible causes:
- Main control board defective
- Sorter stapler(A374/A377)/finisher main board defective
- Harness defective
- Fiber optics defective

1.15 DUAL JOB FEEDER

SC700 - Abnormal DJF/RDH feed-in motor movement
SC701 - Abnormal DJF/RDH transport belt motor movement
SC702 - Abnormal DJF/RDH feed out motor movement
SC703 - Abnormal RDH inverter motor movement

Definition: [level: B]
Encoder pulse is not detected by the DJF main board in the main motor on condition. The first time, a jam occurs. The second time, an SC is displayed.

Possible causes:
- DJF feed motor defective
- DJF transport motor defective
- DJF feed out motor defective
- DJF inverter motor defective

1.16 FINISHER / SORTER STAPLER

SC730 - Abnormal *transport motor (A374, A377 sorter staplers / A379 finisher) movement

Definition: [level: D]
When the encoder pulse is not detected by the SS (or finisher) main board for 200 msec after the *transport motor starts, a jam is displayed. If this occurs twice, an SC is displayed.

Possible causes:
- *Transport motor

	A374 Sorter Stapler	A377 Sorter Stapler	A379 Finisher
*	Roller drive motor	Main motor	Transport drive motor

SC731 - Abnormal bin drive (lift) motor movement (A374, A377 sorter staplers)

Definition: [level: B]
If the wheel sensor (bin lift timing sensors) is not off after 2 seconds from when the bin drive (lift) motor stars, jam "R2" is indicated.
If the wheel sensor (bin lift timing sensors) is not on after 2 seconds from when the wheel sensor (bin lift timing sensors) detects off, jam "R2" is indicated.
If the condition above occurs twice, an SC is displayed.

Possible causes:

- Wheel sensor (bin lift timing sensors) defective
- Bin drive (Lift) motor defective

SC732 - Tray shift motor (A379 Finisher)

Definition: [level: B]
The shift tray half turn sensor does not detect the on condition for 2 seconds after the finisher tray shift motor starts.
The first time, a jam is indicated. The 2nd time, an SC is displayed.

Possible causes:

- Tray shift motor defective
- Shift tray half turn sensor defective

SC733 - Shift tray lift motor (A379 finisher)

Definition: [level: B]
The stack height sensor 1 or 2 do not detect the on condition for the specified time after the finisher shift tray lift motor.

Possible causes:

- Shift tray lift motor defective
- Stack height sensor 1 or 2 defective

SC735 - Abnormal jogger motor movement (A374, A377 sorter staplers / A379 Finisher)

Definition: [level: B]

When the jogger moves back to the home position, the jogger home position sensor does not detect the on condition within 650 pulses. Then, a jam is indicated.

When the jogger moves from the home position forward, and moves back to the home position, the jogger home position sensor does not detect the on condition within 100 pulses. Then, a jam is indicated.

If the above condition occurs twice, an SC is displayed.

Possible causes:

- Jogger motor defective
- Jogger home position sensor defective

SC737 - Abnormal gripper motor movement (A374, A377 sorter staplers)

Definition: [level: B]

When the gripper moves to the staple position, the gripper home position sensor does not detect the on condition. Then a jam is indicated.

When the gripper moves from the staple position to the bin position, the gripper home position sensor does not detect the on condition within 1070 pulses. Then a jam is indicated.

When the gripper moves to the home position, the gripper home position sensor does not detect the on condition within 1.25 seconds. Then a jam is indicated.

When the gripper moves from the home position forward, and moves back to the home position, the gripper home position does not detect the on condition within 500 msec or more. Then a jam is indicated.

If the above condition occurs twice, an SC is displayed.

Possible causes:

- Gripper motor defective
- Gripper home position sensor defective

SC738 - Abnormal staple motor movement (A374, A377 sorter staplers)

Definition: [level: B]

The staple home position sensor does not detect the on condition within 600 msec after the motor starts. Then a jam is indicated. If this occurs twice, this SC is displayed.

Possible causes:

- Staple unit (staple motor) defective
- Staple is jammed in the staple unit.

SC740 - Abnormal staple unit drive motor movement (A377 sorter stapler / A379 finisher)

Definition: [level: B]

The staple unit home position sensor does not detect the on condition when the staple unit is in the home position. A jam is indicated.
The staple unit home position sensor does not detect the on condition (within 1640 pulses) when the staple unit moves to the home position. A jam is indicated.
The staple unit home position sensor does not detect the on condition (within 280 pulses) when the staple unit moves forward from the home position and moves back to the home position. A jam is indicated.
If the above condition occurs twice, this SC is displayed.

Possible causes:

- Staple unit drive motor defective
- Staple unit home position sensor defective

SC741 - Abnormal bin rear plate motor movement (A377 sorter stapler)

Definition: [level: B]

When the rear bin plate is open, the bin rear plate open sensor does not detect the on condition for 750 msec or more after the motor starts. Then a jam is indicated.
When the rear bin plate is closed, the bin rear plate home position sensor does not detect the on condition for 750 msec or more after the motor starts. Then a jam is indicated.
In the initial condition, the bin rear plate open sensor does not detect the on condition for 1.25 seconds or more after the motor starts. Then a jam is indicated.
If the above condition occurs twice, this SC is displayed.

Possible causes:

- Bin rear plate drive motor defective
- Bin rear plate open sensor defective
- Bin rear plate home position sensor defective

SC742 - Abnormal stack feed out motor movement (A379 finisher)

Definition: [level: B]
No encoder pulses is detected for 500 msec. or more.

Possible causes:

- Stack feed out motor defective

1.17 OTHERS

SC900 - Total counter failure (staying in the off condition)

Definition: [level: D]
The total counter stays in the off condition.

Possible causes:

- Total counter defective

SC901 - Total counter failure (staying in the on condition)

Definition: [level: D]
The total counter stays in the on condition.

Possible causes:

- Total counter defective

SC full used toner bottle

Definition: [level: A]
The toner overflow switch is activated.

Possible causes:

- Toner collection bottle is full
- Toner overflow switch defective

NOTE: Clear the SC full used toner bottle as follows:

1. While the main switch is on, open the front doors then take out the toner collection bottle (used toner bottle).
2. Remove the toner collection bottle then empty and clean the bottle.
3. Install the empty toner collection bottle.
4. Close the front doors.

2. ELECTRICAL COMPONENT DEFECTS

2.1 SENSORS

NOTE: All photo-interrupters go low (GND) when the actuator interrupts the gap between the LED and the photo transistor.

Component (Symbol)	CN	Condition	Symptom (when the main switch turns on)
Scanner HP (S-1)	512-1	Open	SC125 is displayed
		Shorted	SC121 is displayed
Platen Cover Position-1 (S-2)	512-7	Open	APS and AMS do not function correctly.
		Shorted	–
Platen Cover Position-2 (S-3)	518-1	Open	"Original is on the glass" indicator is displayed even if the original on the glass has already been removed.
		Shorted	–
Lens vertical HP (S-4)	512-5	Open	SC141 is displayed
		Shorted	SC140 is displayed
Lens Horizontal HP (S-5)	513-1	Open	SC143 is displayed
		Shorted	SC142 is displayed
3rd Scanner HP (S-6)	511-1	Open	SC145 is displayed
		Shorted	SC144 is displayed
By-Pass Paper End (S-7)	108-A5	Open	"Paper end" indicator is not displayed even if there is no paper on the by-pass feed table.
		Shorted	"Paper end" indicator is displayed even if paper is set on the by-pass feed table.
Guide Plate Position (S-8)	108-B9	Open	"Guide plate open" indicator is not displayed even if the guide plate is open.
		Shorted	"Guide plate open" indicator is displayed even if the guide plate is closed.
Jogger HP (S-9)	112-A10	Open	Jogger motor locks (SC522 counts up)
		Shorted	Jogger motor locks (SC523 counts up)
Vertical Transport (S-10)	108-A2	Open	–
		Shorted	–
Duplex Exit (S-11)	112-A8	Open	"Paper Jam T" indicator is displayed even if there is no paper.
		Shorted	Whenever a duplex copy is made, "Paper Jam T" occurs.

Component (Symbol)	CN	Condition	Symptom (when the main switch turns on)
Duplex Entrance Sensor (S-12)	112-A7	Open	"Paper Jam T" indicator is displayed even if there is no paper.
		Shorted	Whenever a duplex copy is made, "Paper Jam T" occurs.
Duplex Paper End (S-13)	112-A9	Open	"Copies left in the duplex tray...." indicator is displayed even if there is paper in the duplex tray.
		Shorted	Only one rear side copy is made regardless of the quantity of copies.
Duplex Transport (S-14)	109-A4	Open	"Paper Jam T" indicator is displayed even if there is no paper.
		Shorted	Whenever a duplex copy is made, "Paper Jam T" occurs.
Exit (S-15)	109-A2	Open	"Paper Jam E" indicator is displayed even if there is no paper.
		Shorted	Whenever the copy is fed out, "Paper Jam D" occurs.
Fusing Exit (S-16)	109-B7	Open	"Paper Jam D" indicator is displayed even if there is no paper.
		Shorted	Whenever a copy is made, "Paper Jam C and D" occurs.
Paper Guide (S-17)	109-B4	Open	–
		Shorted	Whenever a duplex copy is made, "Paper Jam T" occurs.
Auto Image Density (S-18)	507-1	Open	Image density will be abnormal.
		Shorted	
Original Length-1 (S-19)	508-8, 9, 10	Open	The CPU cannot properly detect original size. APS and AMS do not function correctly.
		Shorted	
Original Length-2 (S-20)	509-3, 4, 5	Open	The CPU cannot properly detect original size. APS and AMS do not function correctly.
		Shorted	
Original Width (S-21)	508-3, 4, 5	Open	The CPU cannot properly detect original size. APS and AMS do not function correctly.
		Shorted	
By-Pass Paper Size (S-22)	114-6	Open	The CPU recognizes that the paper width is 319 mm regardless of the side fence position.
		Shorted	The CPU recognizes that the paper width is 100 mm regardless of the side fence position.
Toner Density (S-23)	114-3	Open	Machine quits auto toner supply mode and enters fixed supply mode.
		Shorted	

Component (Symbol)	CN	Condition	Symptom (when the main switch turns on)
Registration (S-24)	108-A7	Open	"Paper Jam C" indicator is displayed even if there is no paper.
		Shorted	Whenever a copy is made, "Paper Jam C" occurs.
Toner End (S-25)	108-B14	Open	Toner is added even if there is too much toner in the toner hopper.
		Shorted	Toner is not supplied even if there is no toner in the toner hopper.
Auto-Response (S-26)	113-B3	Open	The machine does not exit "Screen Saver" mode even if an operator approaches the machine.
		Shorted	"Screen Saver" mode does not work.
Drum Potential (S-27)	110-10	Open	Machine quits auto process control and enters fixed toner supply mode.
		Shorted	
Image Density (S-28)	111-3	Open	Machine quits auto toner supply mode and enters detect mode.
		Shorted	
1st Paper End (S-29)	401-A5	Open	"Paper end" indicator is not displayed even if there is no paper on the paper tray.
		Shorted	"Paper end" indicator is displayed even if paper is set.
1st Paper Near End (S-30)	412-A2	Open	"Paper near end" indicator is not displayed even if the tray is almost empty.
		Shorted	"Paper near end" indicator is displayed even if there is enough paper on the paper tray.
1st Paper Feed (S-31)	402-A1	Open	Whenever paper is fed, it is folded.
		Shorted	"Paper jam A" indicator is displayed even if there is no paper.
2nd Paper Near End (S-32)	412-A5	Open	"Paper near end" indicator is not displayed even if the tray is almost empty.
		Shorted	"Paper near end" indicator is displayed even if there is enough paper on the paper tray.
1st Lift (S-33)	401-A2	Open	"Add paper" indicator is displayed even if there is paper on the tray.
		Shorted	The tray bottom plate locks at the upper position.
2nd Paper End (S-34)	401-B5	Open	"Paper end" indicator is not displayed even if there is no paper on the paper tray.
		Shorted	"Paper end" indicator is displayed even if paper is set.
Toner Collection Motor (S-35)	412-B5	Open	SC342 is displayed.
		Shorted	

Component (Symbol)	CN	Condition	Symptom (when the main switch turns on)
2nd Lift (S-36)	401-B2	Open	"Add paper" indicator is displayed even if there is paper on the tray.
		Shorted	The tray bottom plate locks at the upper position.
3rd Lift (S-37)	403-A2	Open	"Add paper" indicator is displayed even if there is paper on the tray.
		Shorted	The tray bottom plate locks at the upper position.
3rd Paper Near End (A095 copier only) (S-38)	412-A8	Open	"Paper near end" indicator is not displayed even if the tray is almost empty.
		Shorted	"Paper near end" indicator is displayed even if there is enough paper on the paper tray.
3rd Paper End (S-39)	403-A5	Open	"Paper end" indicator is not displayed even if there is no paper on the paper tray.
		Shorted	"Paper end" indicator is displayed even if paper is set.
3rd Paper Feed (S-40)	402-A8	Open	Whenever paper is fed, it is folded.
		Shorted	"Paper jam A" indicator is displayed even if there is no paper.
2nd Paper Feed (S-41)	402-B1	Open	Whenever paper is fed, it is folded.
		Shorted	"Paper jam A" indicator is displayed even if there is no paper.
Base Plate Down (A096 copier only) (S-42)	404-A10	Open	The bottom plate lift lever locks at the lowest position.
		Shorted	The bottom plate is not lowered when paper on the left tray shifts to the right tray and paper is set in the improper position.
Side Fence Positioning (A096 copier only) (S-43)	404-A13	Open	SC510 is displayed
		Shorted	SC511 is displayed
Rear Fence Return (A096 copier only) (S-44)	404-B10	Open	When the rear fence reaches the return position, the rear plate locks there then SC508 is displayed.
		Shorted	SC508 is displayed.
Rear Fence HP (A096 copier only) (S-45)	404-B6	Open	SC508 is displayed.
		Shorted	When the rear fence reaches the return position, SC508 is displayed.

Component (Symbol)	CN	Condition	Symptom (when the main switch turns on)
Left Tandem Paper End (A096 copier only) (S-46)	404-B12	Open	The rear fence moves back and forth continuously.
		Shorted	The paper on the left tray is not moved to the right tray.
LCT Near End (A096 copier only) (S-47)	412-A7	Open	"Paper near end" indicator is not displayed even if the tray is almost empty.
		Shorted	"Paper near end" indicator is displayed even if there is enough paper on the paper tray.
Tray Down (A096 copier only) (S-48)	403-B2	Open	When the bottom plate is lowered, it locks at the lowest position.
		Shorted	"Paper end" indicator is displayed even if there is paper on the tray.
Tray Paper End (A096 copier only) (S-49)	412-A11	Open	The bottom plate raises & lowers even if no paper is set.
		Shorted	The bottom plate does not raise even if paper is set on the tray.

2.2 SWITCHES

Component	CN No.	Condition	Symptom
By-Pass Table (SW-1)	108-B11	Open	"Open the by-pass tray" indicator is displayed even if the by-pass tray is opened. Print key stays red.
		Shorted	By-pass feed motor continuously turns.
Front Door Safety (SW-2)	–	Open	"Close the door" indicator lights even if the front door is closed.
		Shorted	Copier does not turn off when the front doors are open.
1st Tray Set (A095 copier only) (SW-3)	407-B8	Open	When the 1st tray is selected, SC502 is displayed.
		Shorted	The 1st tray cannot be selected even if the 1st tray is set in the machine.
2nd Paper Size (SW-4)	407-A2 ~ A6	Open	The CPU cannot detect proper paper size, and misfeeds may occur when a copy is made.
		Shorted	
Toner Overflow (SW-5)	412-B9	Open	SC "Full Used Toner Bottle" indicator lights even if the toner bottle is not full.
		Shorted	SC "Full Used Toner Bottle" indicator does not light even if the toner bottle becomes full.
Toner Collection Bottle Set (SW-6)	412-B7	Open	No caution is displayed on the LCD even if the toner collection bottle is set incorrectly.
		Shorted	SC343 is displayed.
Lower Front Door Safety (SW-7)	410-1	Open	Whenever paper is fed from the tray unit, SC501 is displayed.
		Shorted	—
3rd Tray Set (A095 copier only) (SW-8)	407-B1	Open	When the 3rd tray is selected, SC504 is displayed.
		Shorted	The 3rd tray cannot be selected even if the 3rd tray is set in the machine.
Main (SW-9)	—	Open	The copier does not turn on.
		Shorted	The copier does not turn off.
Tray Down (A096 copier only) (SW-10)	402-B14	Open	The 3rd tray bottom plate stays at the lowest position.
		Shorted	The 3rd tray bottom plate stays at the highest position.

2.3 FUSES

2.3.1 DC Power Supply Board

Component	Condition	Symptom
FU801 (125 V, 10 A)	Open	Power is not provided when the main switch is on (No indicator displayed on the operation panel).
FU802 (125 V, 5 A)	Open	Power is not provided when the main switch is on (No indicator displayed on the operation panel).
FU803 (125 V, 6.3 A)	Open	When the 3rd feed station is selected, SC504 is displayed.
FU804 (125 V, 6.3 A)	Open	When the main switch is turned on, SC900 is displayed.
FU805 (125 V, 6.3 A)	Open	When each feed station is selected, the following indication is displayed: 1st: SC510 2nd: Add Paper 3rd: SC504 When the paper is fed from the By-pass feed table, SC342 is displayed.
FU806 (125 V, 6.3 A)	Open	When the 3rd feed station is selected, SC504 is displayed. DJF (RDH) and Sorter Stapler (Finisher) do not operate.

ST25 (A377)

PARTS CATALOG

INTRODUCTION

This chapter instructs you the numbers and names of this parts on this machine.

INDEX to PARTS CATALOG

Location of Unit 2
1. Exterior (A377) 4
2. Transport Section 1(A377) 6
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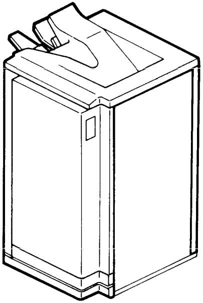
LOCATION OF UNIT

1. EXTERIOR (A377)



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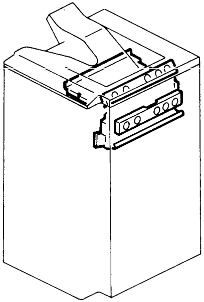
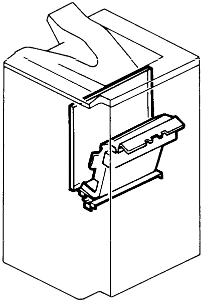
2. TRANSPORT SECTION 1 (A377)



See Page 6

3. TRANSPORT SECTION 2 (A377)



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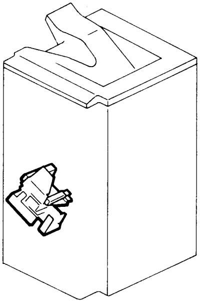
4. STAPLE UNIT 1 (A377)



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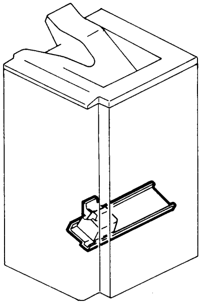
5. STAPLE UNIT 2 (A377)



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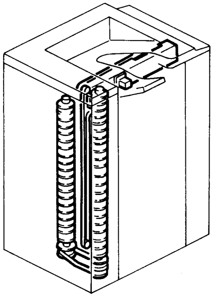
6. STAPLE DRIVE SECTION 1 (A377)



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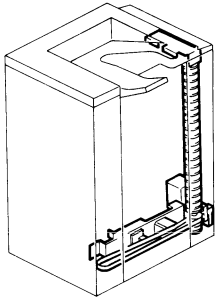
LOCATION OF UNIT

7. STAPLE DRIVE SECTION 2 (A377)



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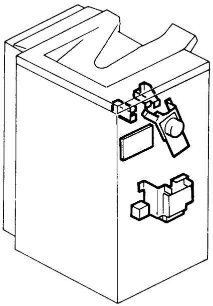
8. DRIVE AND ELECTRICAL SECTION (A377)



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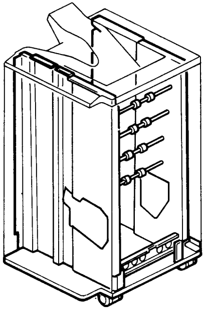
9. FRAME SECTION (A377)



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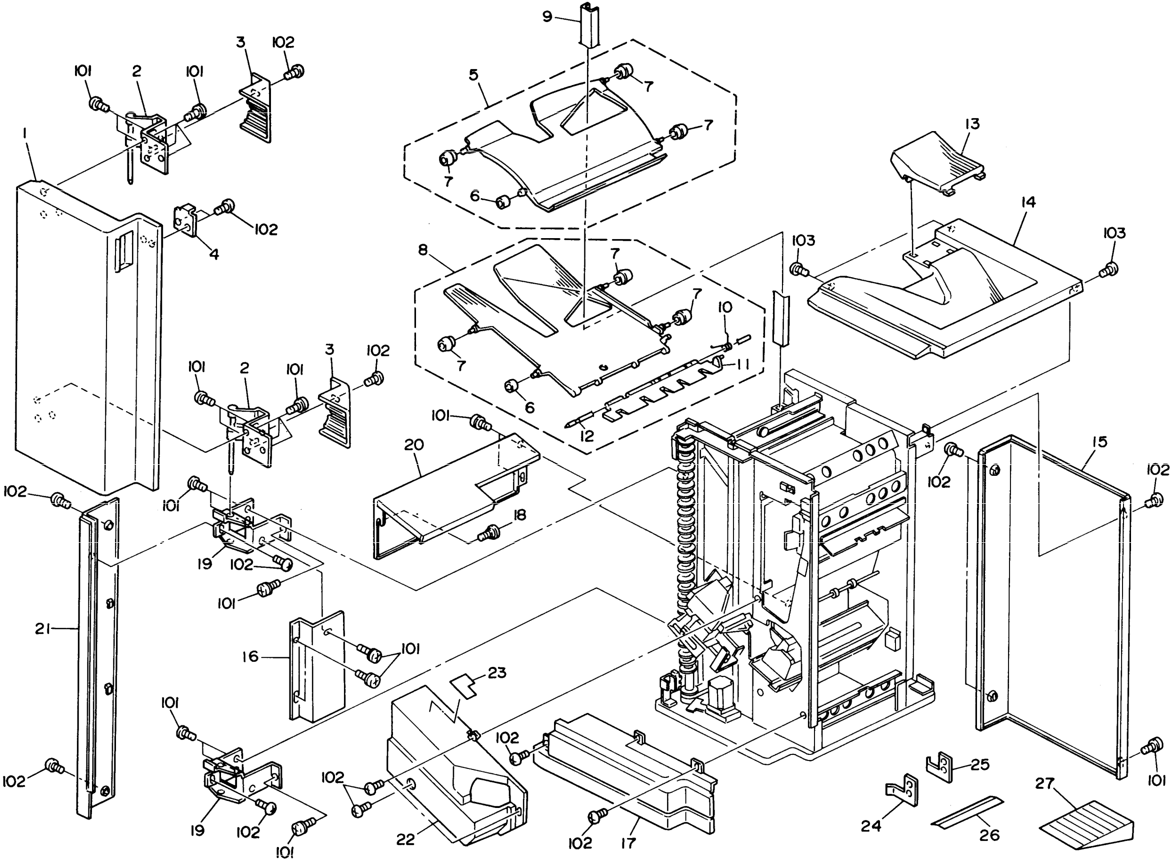
1. EXTERIOR (A377)



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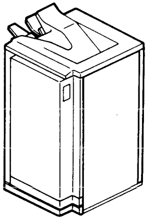
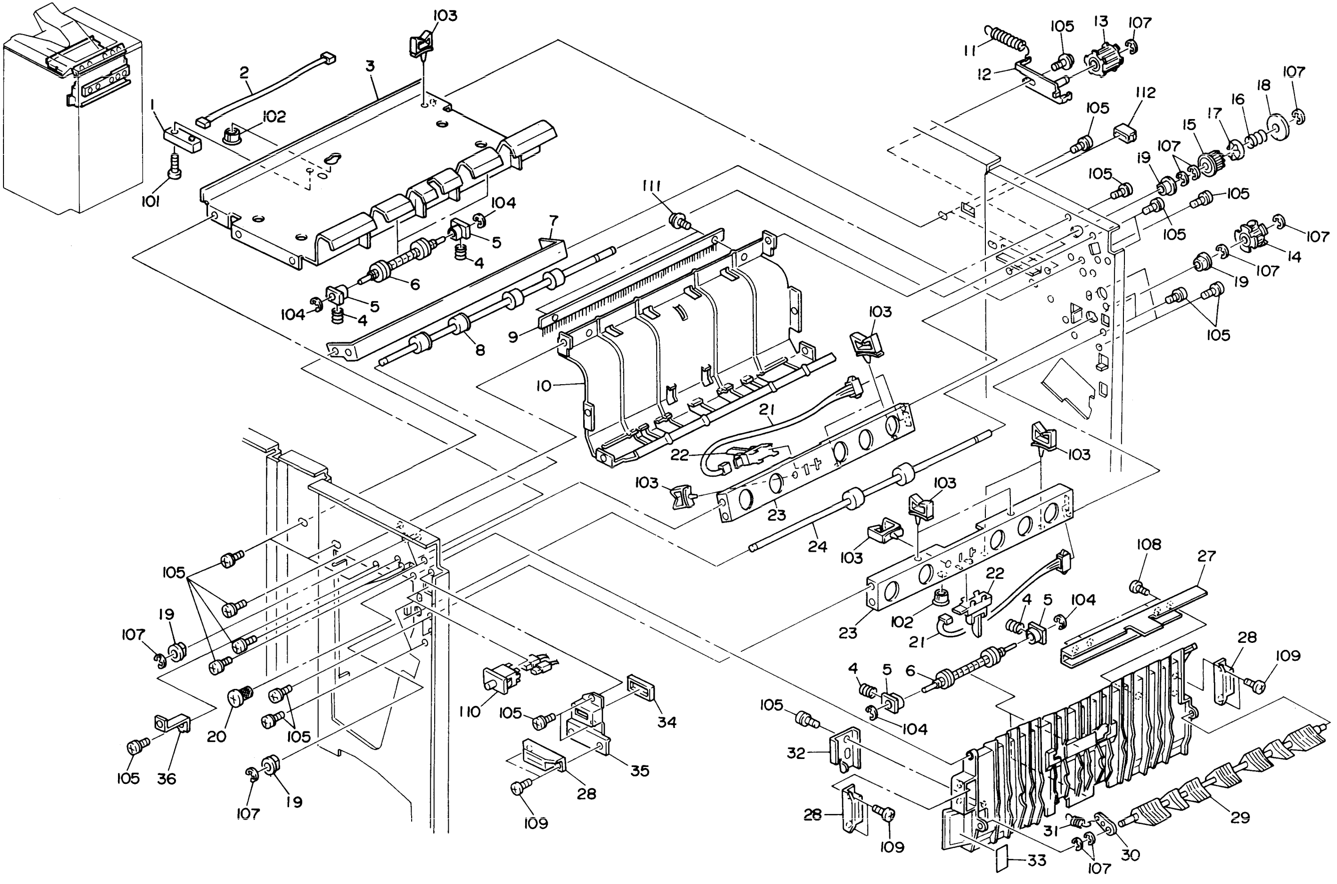


1. EXTERIOR (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 1571	Front Door	1
2	A377 1645	Hinge	2
3	A377 1581	Hinge Cover	2
4	A377 1651	Magnet Catch Plate	1
5	A377 3460	Supporting Bin	1
6	A377 3447	Small Guide Roller	21
7	A377 3446	Guide Roller	63
8	A377 3410	Bin Ass'y	20
9	A377 4151	Jogger Plate	1
10	AA06 6225	End Fence Spring	20
11	A377 3431	Bin End Fence	20
12	A377 3441	End Fence Shaft	20
13	A377 1611	Small Proof Tray	1
14	A377 1511	Top Cover	1
15	A377 1541	Rear Cover	1
16	A377 1631	Upper Wheel Cover	1
17	A377 1531	Lower Cover	1
18	5875 2088	Shoulder Screw- M4	1
19	A377 1641	Hinge Bracket	4
20	A377 1551	Left Cover	1
21	A377 1521	Front Left Cover	1
22	A377 1601	Inner Cover	1
23	A377 1850	Decal - Misfed Removal	1
24	A377 1187	Rear Joint Bracket	1
25	A377 1186	Front Joint Bracket	1
26	A377 2122	Entrance Guide	1
27	A498 6085	Caster Stopper	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0950 4006B	Screw - M4x6	
102	0344 0060F	Philips Truss Head Screw - M4x6	
103	0344 0080F	Philips Truss Head Screw - M4x8	

2. TRANSPORT SECTION 1 (A377)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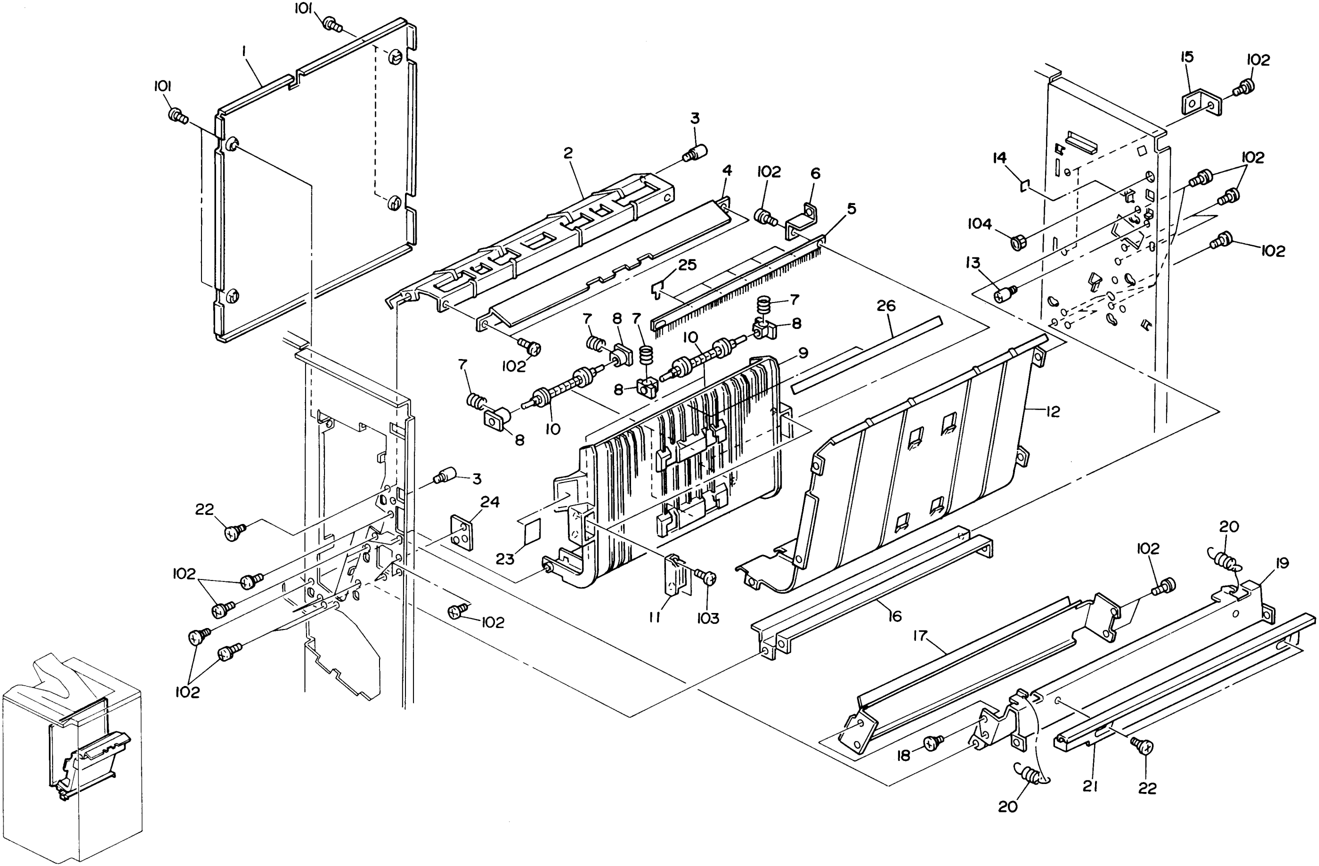
2. TRANSPORT SECTION 1 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AW02 0025	Lower Bin/jam Sensor	1
2	A377 5470	Upper Bin Sensor Harness	1
3	A377 1141	Upper Stay	1
4	A458 2479	Lock Pin Spring	8
5	AA08 0034	Bushing - 4x5x7	8
6	AF02 2068	Driver Roller	8
7	A377 2316	Upper Left Guide	1
8	AF02 0307	Exit Roller	1
9	AA12 0027	Antistatic Brush	1
10	A377 2311	Right Guide Plate	1
11	AA06 0092	Release Spring	1
12	A377 2221	Tightener	1
13	AB03 0278	Idler - 20z	1
14	AB03 0374	Timing Pulley - 20Z	1
15	A354 1261	Pulley - 20Z	1
16	A300 3826	Pressre Spping	1
17	A354 1266	Torque Limiter Collar	1
18	A300 3812	Spacer - 6x22x1.5	1
19	AA08 0071	Bushing 4x10x6	4
20	5413 1882	Stepped Screw	1
21	A377 5460	Transport Sensor Harness	2
22	AW02 0049	Photointerruptor - OS - 580213-703	2
23	A377 1151	Stay	2
24	AF02 0305	Transport Roller	1
25	5053 0447	Bushing - 6mm	2
26	A377 2321	Left Guide Plate	1
27	A377 2326	Support Plate	1
28	AG07 0004	Magnetic Catch	3
29	A377 2331	Junction Gate	1
30	A377 2332	Junction Gate Lever	1
31	5940 2641	Feed-in Solenoid Spring	1
32	A377 2333	Junction Gate Bracket	1
33	A377 1870	Decal - R1	1
34	A377 1662	Door Switch Actuator	1
35	A377 1661	Door Switch Cover	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	5442 5839	Angle - Cord Clamp 30	1
101	0313 0140B	Philips Pan Head Screw - M3x14	
102	1106 0193	Bushing - 7.9mm	
103	1105 0196	Harness Clamp	
104	0720 0030E	Retaining Ring - M3	
105	0951 4006B	Philips Screw With Washer- M4x6	
106	0720 0060E	Retaining Ring - M6	
107	0720 0040E	Retaining Ring - M4	
108	0414 0122W	Tapping Screw - M4x12	
109	0353 0060W	Philips Pan Head Screw - M3x6	
110	1204 2334	Safety Switch - FA1L-AA20	
111	0951 4006B	Philips Screw With Washer- M4x6	
112	1102 4924	CT Connector-4P	

3. TRANSPORT SECTION 2 (A377)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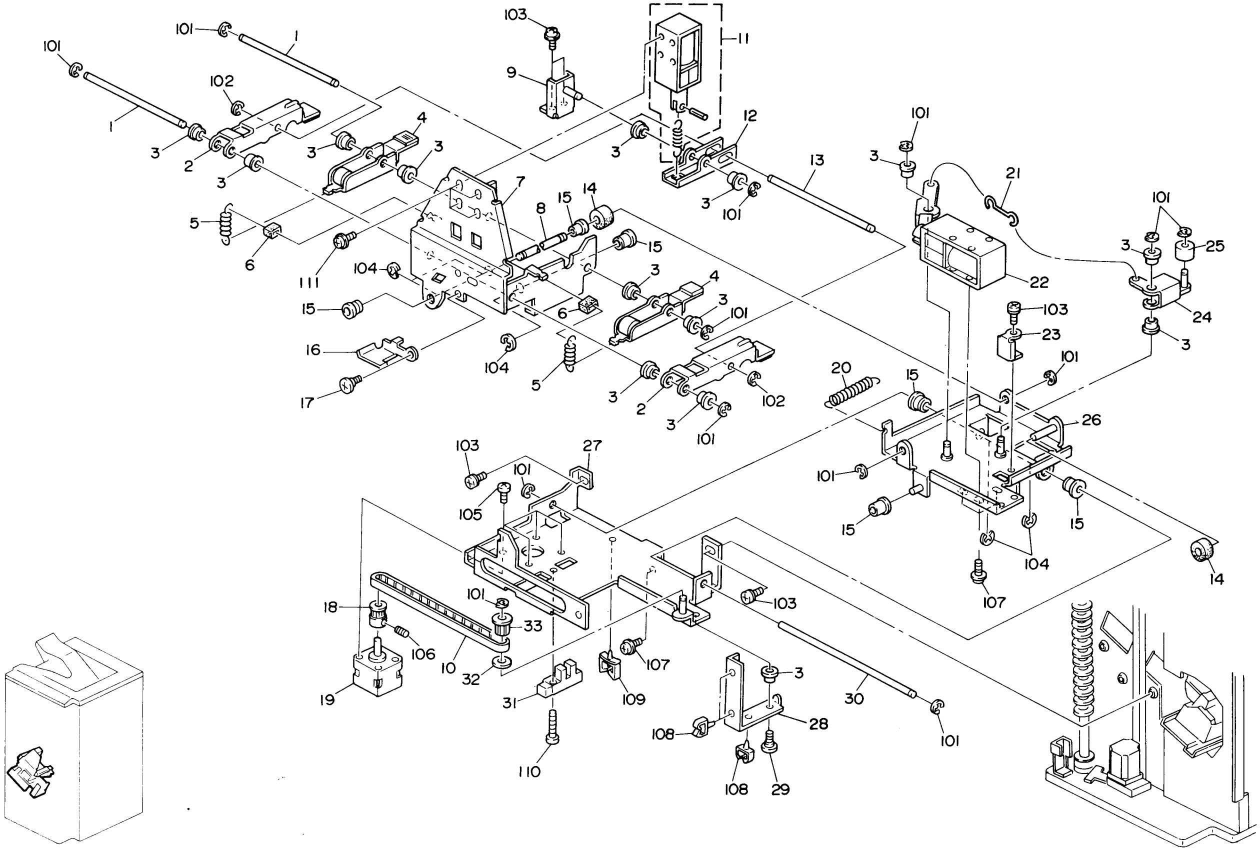
3. TRANSPORT SECTION 2 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 1621	Upper Inner Cover	1
2	A377 2111	Lower Entrance Guide	1
3	5413 1875	Knob Screw	1
4	A377 2121	Relay Guide	1
5	A377 2144	Antistatic Brush	1
6	A377 2142	Grounding Spring Plate	1
7	A458 2479	Lock Pin Spring	8
8	AA08 0034	Bushing - 4x5x7	8
9	A377 2141	Left Lower Guide	1
10	AF02 2068	Driver Roller	4
11	AG07 0004	Magnetic Catch	1
12	A377 2131	Right Lower Guide	1
13	AA14 3059	Pin - 6x16	1
14	A377 1138	Magnet Catch Seal	1
15	A377 1656	Inner Cover Angle	2
16	A377 1171	Exit Stay	1
17	A377 2161	Middle Guide Plate	1
18	5403 2075	Stepped Screw	2
19	A377 1181	Middle Stay	1
20	AA06 0551	Pressure Spring	2
21	A377 1182	Joint Lever	1
22	54131882	Stepped Screw	3
23	A377 1875	Decal - R2	1
24	A377 1126	Front Cover Plate	1
25	A377 2146	Exit Guide Mylar	5
26	A377 2166	Middle Guide Mylar	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0344 0060F	Philips Truss Head Screw - M4x6	
102	0950 4006B	Screw - M4x6	
103	0353 0060W	Philips Pan Head Screw - M3x6	
104	1106 0193	Bushing - 7.9mm	

4. STAPLE UNIT 1 (A377)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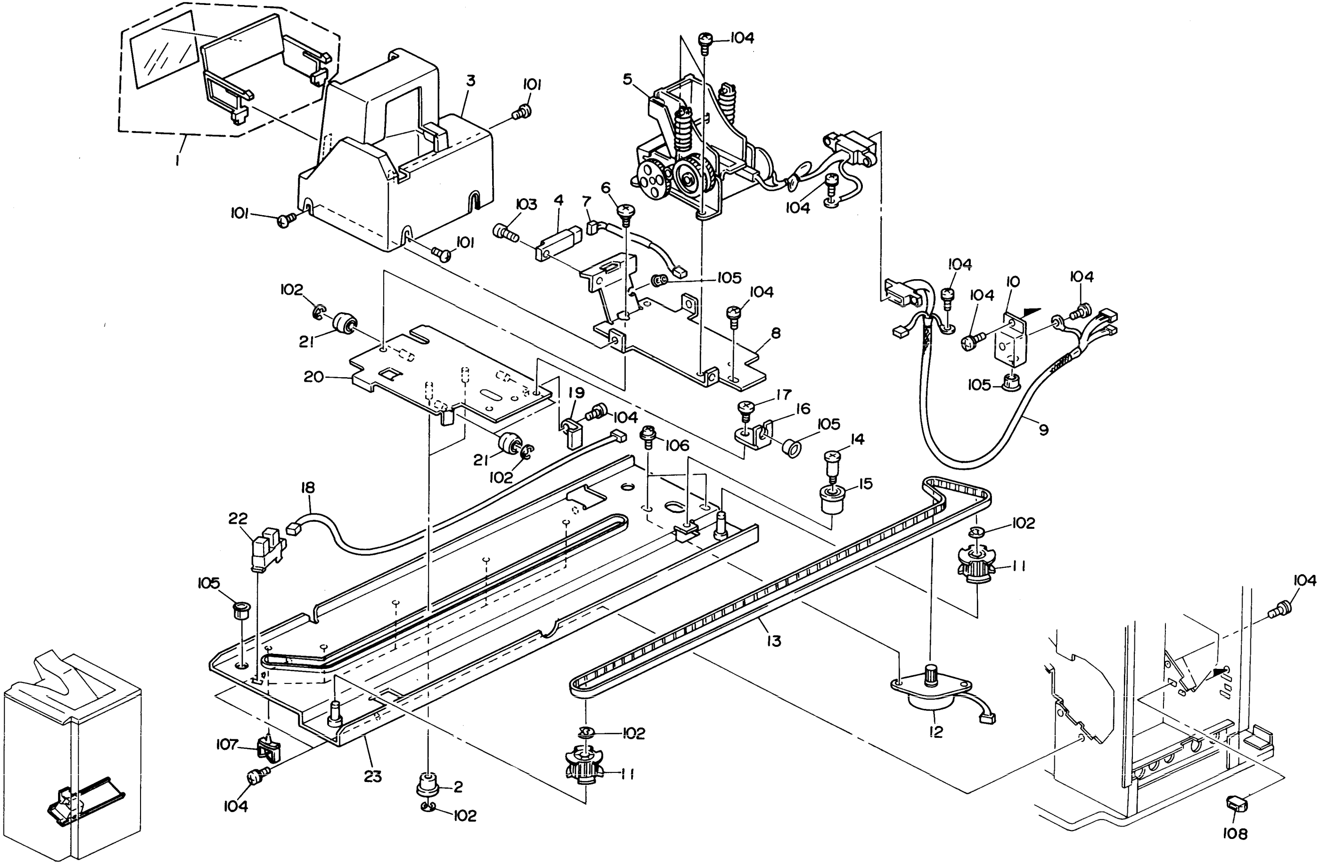
4. STAPLE UNIT 1 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 4432	Gripper Arm Shaft - M6	2
2	A377 4411	Upper Gripper Arm	2
3	AA08 0072	Bushing - 6x10X3	14
4	A377 4413	Lower Gripper Arm	2
5	AA06 0061	Spring - Fork Gate Lever	2
6	A498 4625	Arm Cushion	2
7	A377 4436	Gripper Solenoid Bracket	1
8	A377 4465	Gripper Guide Rod	1
9	A377 4425	Solenoid Arm Bracket	1
10	AA04 3355	Timing Belt - B40S2M320	1
11	A377 4435	Gripper Arm Solenoid	1
12	A377 4421	Solenoid Lever	1
13	A377 4433	Gripper Arm Shaft - M4	1
14	A377 4466	Cushion	2
15	AA08 2042	Bushing - 6x10x6.5mm	6
16	A377 4434	Gripper Lock Plate	1
17	5413 1882	Stepped Screw	1
18	AB03 0216	Pulley - 15Z	1
19	AX05 0057	Stepping Motor - DC24V 3.84W	1
20	AA06 0547	Tension Spring	1
21	A377 4463	Hook	1
22	A377 4460	Gripper Slid Solenoid	1
23	A377 4491	Timing Belt Stopper	1
24	A377 4451	Slider Arm	1
25	A377 4455	Slide Roller	1
26	A377 4441	Slider Support Bracket	1
27	A377 4471	Gripper Bracket	1
28	A377 4488	Gripper Harness Bracket	1
29	5419 5714	Stepped Screw - M4	1
30	A377 4485	Gripper Guide Shaft	1
31	AW02 0022	Photointerruptor	1
32	A498 4665	Pulley Flange	1
33	AB03 0218	Pulley - 15Z	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0040E	Retaining Ring - M4	
102	0720 0030E	Retaining Ring - M3	
103	0950 4006B	Screw - M4x6	
104	0720 0080E	Retaining Ring - M8	
105	0313 0050B	Philips Pan Head Screw - M3x5	
106	0574 0040E	Hexagon Headless Set Screw - M4x4	
107	0951 4006B	Philips Screw With Washer - M4x6	
108	1105 0234	Clamp	
109	1105 0291	Wire Saddle	
110	0314 0100B	Philips Pan Head Screw - M4x10	
111	0951 3005B	Philips Screw With Flat Washer M3x5	

5. STAPLE UNIT 2 (A377)



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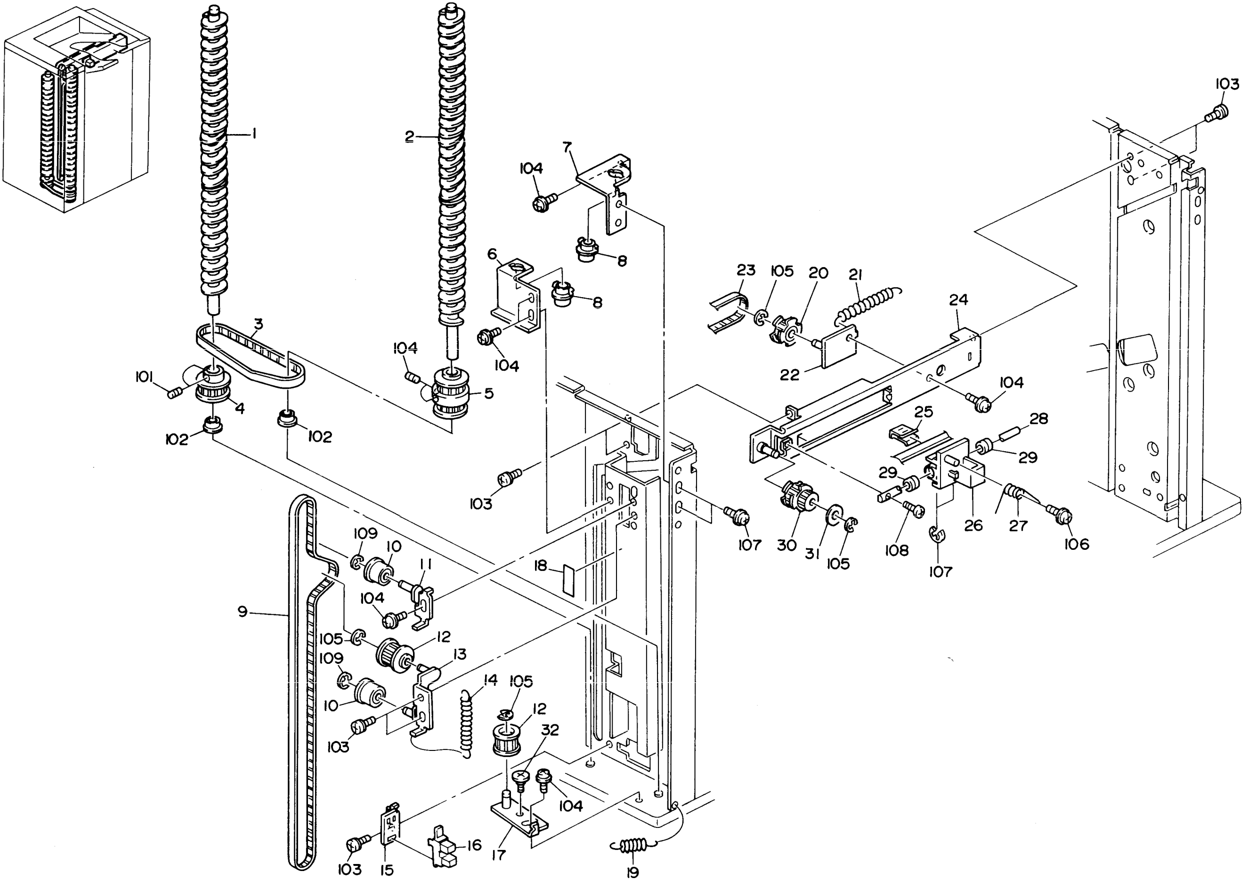
5. STAPLE UNIT 2 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 1607	Entrance Guide	1
2	A377 4742	Slider Guide	2
3	A377 1606	Stapler Cover	1
4	A010 5700	Sensor	1
5	AJ01 1007	Stapler-EH-5RR4	1
6	5413 1882	Stepped Screw	1
7	A377 5480	Paper Sensor Harness	1
8	A377 4711	Stapler Bracket	1
9	A377 5440	Stapler Harness	1
10	A377 4745	Harness Cover	1
11	AB03 0394	Timing Pulley-30Z	2
12	AX04 0067	Stepping Motor - 0.95A 9.5V	1
13	AA04 3357	Timing Belt - 1110P2M6	1
14	A469 3175	Idle Pulley Stud - Short	1
15	5887 4185	Idler Pulley	1
16	A377 4738	Harness Bracket	1
17	5442 1659	Stepped Screw - M4	1
18	A377 5450	Position Sensor Harness	1
19	A377 4736	Timing Belt Stopper	1
20	A377 4731	Stapler Slider	1
21	A377 4741	Roller - M14	3
22	AW02 0021	Photointerruptor - 175487-3	1
23	A377 4721	Stapler Slide Bracket	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0344 0060F	Philips Truss Head Screw - M4x6	
102	0720 0040E	Retaining Ring - M4	
103	0313 0100B	Philips Pan Head Screw - M3x10	
104	0950 4006B	Screw - M4x6	
105	1106 0193	Bushing - 7.9mm	
106	0951 3005B	Philips Screw With Flat Washer M3x5	
107	1105 0310	Wire Clamp	
108	1102 5194	Connector - 7P	

6. STAPLE DRIVE SECTION 1 (A377)



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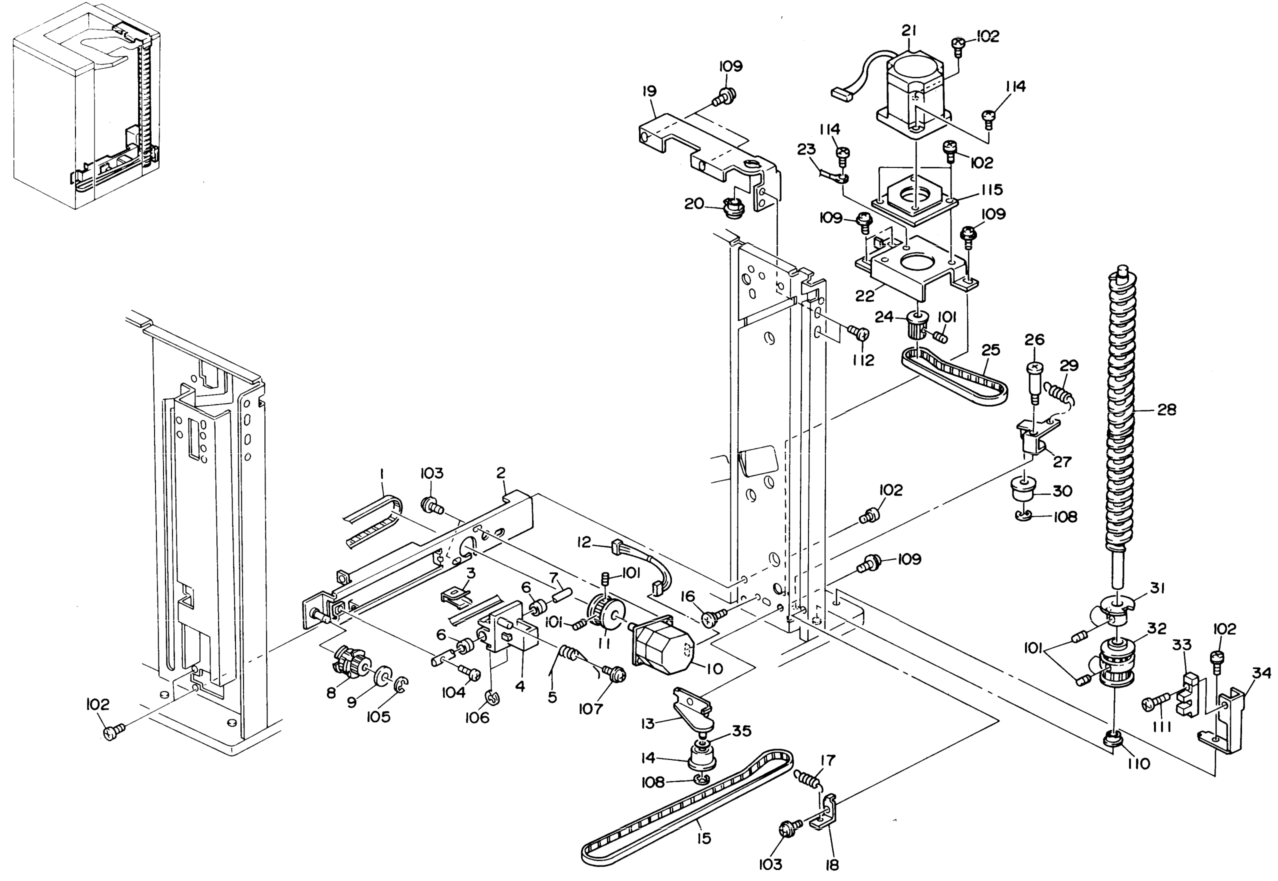
6. STAPLE DRIVE SECTION 1 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 3102	Short Helical Wheel	1
2	A377 3112	Long Helical Wheel	1
3	AA04 3350	Timing Belt - B60S3M426	1
4	A377 3151	Timing Pulley - 36Z	1
5	A377 3156	Timing Pulley - 36Z L8/L8	1
6	A377 3131	Rear Right Fixing Plate	1
7	A377 3136	Rear Left Fixing Plate	1
8	A377 3145	Helical Wheel Bushing	2
9	AA04 3356	Timing Belt - B60S3M1680	1
10	5887 4185	Idler Pulley	2
11	A377 4186	Idler Bracket	1
12	5214 1811	Idle Pulley - 20Z	2
13	A377 4181	Jogger Adjusting Bracket	1
14	AA06 0548	Tension Spring	1
15	A377 4161	Jogger Sensor Bracket	1
16	AW02 0021	Photointerruptor - 175487-3	1
17	A377 3246	Adjusting Bracket	1
18	A377 1840	Decal - Service	1
19	AA06 0555	Tension Spring	1
20	AB03 0393	Timing Pulley - 25Z	1
21	AA06 0544	Tension Spring	1
22	A377 4141	Pulley Bracket	1
23	AA04 3354	Timing Belt - B40S3M633	1
24	A377 4131	Upper Jogger Stay	1
25	A354 4475	Timing Belt Stopper - Side Fence	1
26	A377 4112	Upper Jogger Plate Holder	1
27	AA06 6549	Jogger Plate Spring	1
28	A377 4138	Jogger Shaft	1
29	AA08 2042	Bushing - 6x10x6.5mm	2
30	AB03 3051	Timing Pulley - 25Z	1
31	A300 3812	Spacer - 6x22x1.5	1
32	5403 2075	Stepped Screw	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0574 0040E	Hexagon Headless Set Screw - M4x4	
102	0741 3006	Ball Bearing - 6x17x6mm	
103	0950 4006B	Screw - M4x6	
104	0951 4006B	Philips Screw With Washer - M4x6	
105	0720 0040E	Retaining Ring - M4	
106	0965 3008B	Tapping Screw With Washer - M3x8	
107	0720 0080E	Retaining Ring - M8	
108	0313 0080B	Philips Pan Head Screw - M3x8	
109	0720 0060E	Retaining Ring - M6	

7. STAPLE DRIVE SECTION 2 (A377)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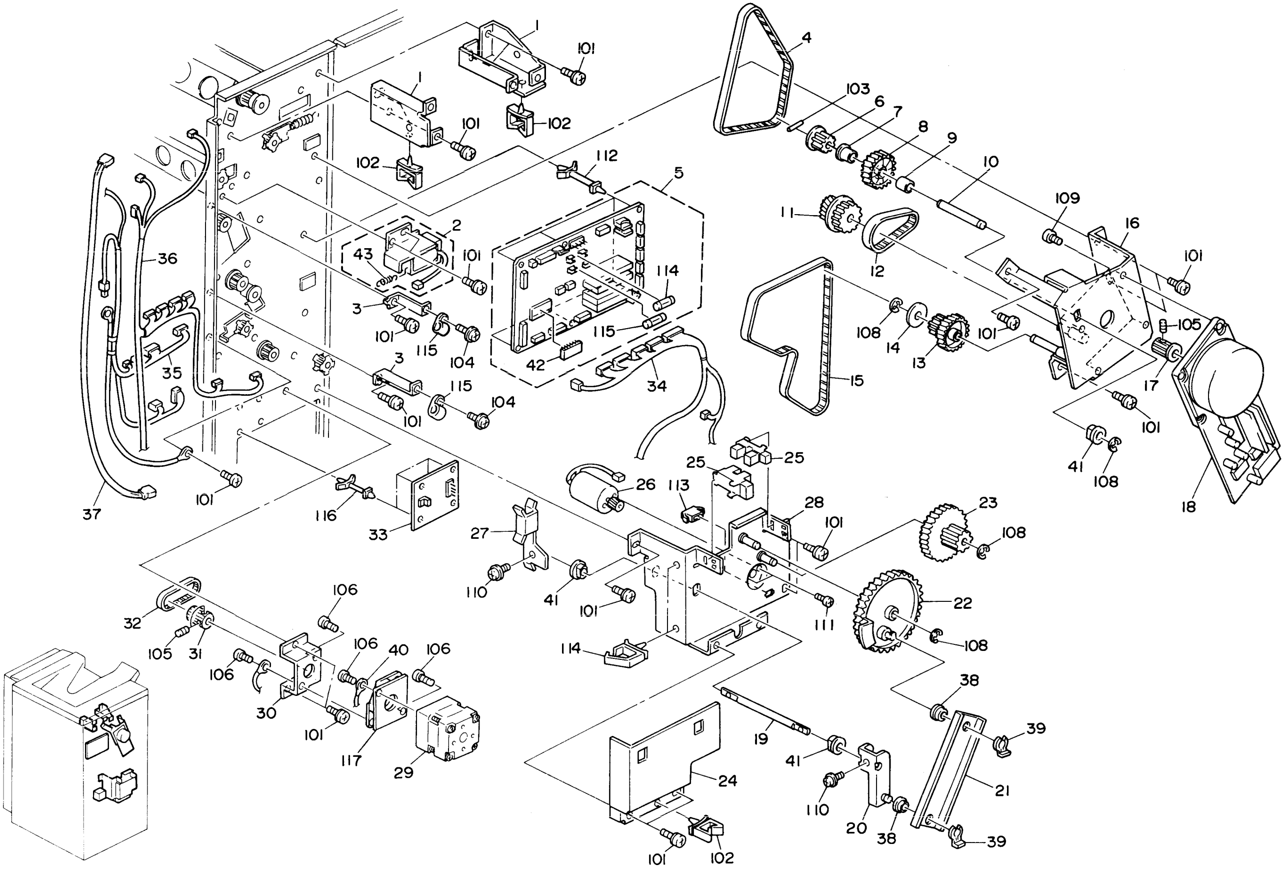
7. STAPLE DRIVE SECTION 2 (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AA04 3354	Timing Belt - B40S3M633	1
2	A377 4133	Lower Jogger Stay	1
3	A354 4475	Timing Belt Stopper - Side Fence	1
4	A377 4122	Lower Jogger Plate Holder	1
5	AA06 6549	Jogger Plate Spring	1
6	AA08 2042	Bushing - 6x10x6.5mm	2
7	A377 4138	Jogger Shaft	1
8	AB03 3051	Timing Pulley - 25Z	1
9	A300 3812	Spacer - 6X22X1.5	1
10	AX04 0066	Stepping Motor -11W	1
11	A377 4216	Timing Pulley - 34Z	1
12	A377 5490	Jogger Harness	1
13	A377 3242	Adjusting Bracket	1
14	5887 4185	Idler Pulley	1
15	AA04 3352	Timing Belt - B60S3M918	1
16	5206 2684	Shoulder Screw - M3	1
17	AA06 0555	Tension Spring	1
18	5887 2245	Spring Anchor	1
19	A377 3141	Front Fixing Plate	1
20	A377 3145	Helical Wheel Bushing	1
21	AX06 0081	Stepping Motor - DC 8.4W	1
22	A377 3202	Stepping Motor Bracket	1
23	A377 5465	Grounding Harness	1
24	AB03 0437	Timing Pulley - 18Z	1
25	AA04 3353	Timing Belt - B100S3M300	1
26	A469 3142	Idle Pulley Stud - Long	1
27	A377 3262	Tension Bracket	1
28	A377 3112	Long Helical Wheel	1
29	AA06 0556	Tension Spring	1
30	5887 2291	Idle Roller	1
31	A377 3166	Bin Posioning Shutter	1
32	A377 3161	Timing Pulley - 36Z L8/L12	1
33	AW02 0022	Photointerruptor	1
34	A377 3212	Posioning Sensor Bracket	1
35	AA13 2152	Spacer - 8x20x1	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0574 0040E	Hexagon Headless Set Screw - M4x4	
102	0950 4006B	Screw - M4x6	
103	0951 3005B	Philips Screw With Flat Washer M3x5	
104	0313 0080B	Philips Pan Head Screw - M3x8	
105	0720 0040E	Retaining Ring - M4	
106	0720 0080E	Retaining Ring - M8	
107	0965 3008B	Tapping Screw With Washer - M3x8	
108	0720 0060E	Retaining Ring - M6	
109	0951 4006B	Philips Screw With Washer - M4x6	
110	0741 3006	Ball Bearing - 6x17x6mm	
111	0314 0100B	Philips Pan Head Screw - M4x10	
112	0344 0060F	Philips Truss Head Screw - M4x6	
113	1005 0946	Stepping Motor Cushion	
114	0314 0080B	Philips Pan Head Screw - M4x8	
115	1005 0946	Stepping Motor Cushion	

8. DRIVE AND ELECTRICAL SECTION (A377)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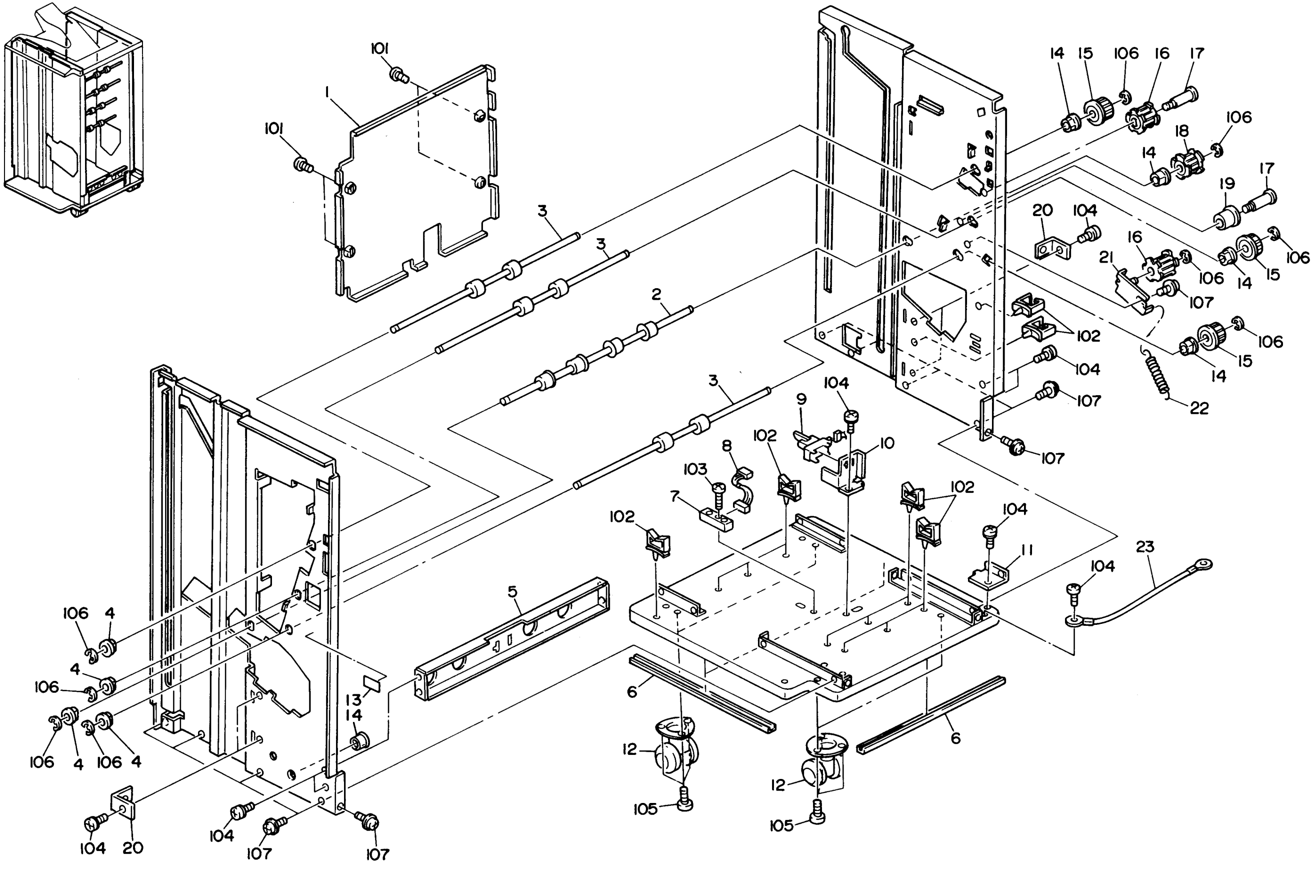
8. DRIVE AND ELECTRICAL SECTION (A377)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A377 1636	Upper Rear Cover Bracket	2
2	A377 2340	Junction Gate Solenoid	1
3	5442 5839	Angle-Cord Clamp 30	2
4	AA04 3350	Timing Belt- B60S3M426	1
5	A377 5100	Main Control Board	1
6	AB03 0325	Pulley-20Z	1
7	AA08 0071	Bushing-6x10x6	1
8	AB01 0337	Gear-70Z	1
9	A377 2216	Spacer-6x10x9	1
10	AA14 5215	Clutch Shaft	1
11	AB03 3053	Gear Pulley - 35/43Z	1
12	AA04 3347	Timing Belt - 126P2M6	1
13	AB03 3054	Gear Pulley - 70/20Z	1
14	A300 3812	Spacer - 6x22x1.5	1
15	AA04 3349	Timing Belt - 660P3M6	1
16	A377 2211	Brushless Motor Bracket	1
17	AB03 0436	Timing Pulley - 20Z	1
18	AX06 0080	Brushless Motor -DC 15W	1
19	A377 3323	Link Shaft	1
20	A377 3315	Link Bracket	1
21	A377 3322	End Fence Link	1
22	A377 3326	Gear - 70Z	1
23	AB01 7305	Gear - 18/78Z	1
24	A377 3331	Harness Cover	1
25	AW02 0021	Photointerruptor - 175487-3	2
26	AX04 0053	DC Motor - 24V/2.2W	1
27	A377 3321	End Fence Guide	1
28	A377 3311	End Fence Bracket	1
29	AX05 0057	stepping Motor - DC24V 3.84W	1
30	A377 2231	Stepping Motor Bracket	1
31	AB03 0435	Timing Pulley - 16Z	1
32	AA04 3348	Timing Belt - 150P3M6	1
33	A377 5200	DC Supply Board	1
34	A377 5415	Lower Motor Harness	1
35	A377 5425	Jpper Motor Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	A377 5430	Sensor Harness	1
37	AW03 0032	Optical Fiber	1
38	AA08 0072	Bushing - 6x10X3	2
39	5447 2681	Snap Ring	2
40	A354 5230	Grounging Harness	1
41	5053 0447	Bushing - 6mm	3
42	A377 5103	IC - AM27C256-205DC	1
43	A377 2346	Tension Spring - 20.5mm	1
101	0950 4006B	Screw - M4x6	
102	1105 0310	Wire Clamp	
103	0632 0100G	Pin - 2x10mm	
104	0951 4008B	Philips Screw With Washer - M4x8	
105	0574 0040E	Hexagon Headless Set Screw - M4x4	
106	0313 0050B	Philips Pan Head Screw - M3x5	
107	1005 0944	Stepping Motor Cushion	
108	0720 0040E	Retaining Ring - M4	
109	0314 0060B	Philips Pan Head Screw - M4x6	
110	0951 3005B	Philips Screw With Flat Washer M3x5	
111	0800 0072	Philips Pan Head Screw - M2.6x4	
112	1105 0134	Locking Support	
113	1102 4473	CT Connector - 2P	
114	1107 0752	Fuse - 5A 250V	
115	1107 0748	Fuse - 2A 250V	
116	1105 0160	Clamp	
117	1005 0944	Stepping Motor Cushion	

9. FRAME SECTION (A377)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9. FRAME SECTION (A377)

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2	AF02 0306	Exit Roller	1
3	AF02 0304	Transport Roller	3
4	5053 0447	Bushing-6mm	4
5	A377 1151	Stay	1
6	A377 1118	Edge Guard	3
7	AW02 0026	Upper Bin/jam Sensor	1
8	A377 5475	Lower Bin Sensor Harness	1
9	AW02 0049	Photointerruptor - OS -580213-703	1
10	A377 3222	Home Position Sensor Bracket	1
11	A377 1637	Lower Rear Cover Bracket	1
12	AH01 2010	Caster - 50m	4
13	A377 1860	Decal - Add Staple	1
14	AA08 0071	Bushing -6x10x6	4
15	AB03 0434	Timing Pulley - 20Z	3
16	AB03 0278	Idler - 20z	2
17	5887 4195	Stopper Screw	2
18	AB03 0374	Timing Pulley - 20Z	1
19	5887 4185	Idler Pulley	1
20	A377 1656	Inner Cover Angle	4
21	A377 2221	Tightener	1
22	AA06 0092	Release Spring	1
23	A377 5495	Grounding Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
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102	1105 0310	Wire Clamp	
103	0313 0140B	Philips Pan Head Screw - M3x14	
104	0950 4006B	Screw - M4x6	
105	0315 0080B	Philips Pan Head Screw - M5x8	
106	0720 0040E	Retaining Ring - M4	
107	0951 4008B	Philips Screw With Washer - M4x8	
108	0720 0060E	Retaining Ring - M6	

10. DECAL AND DOCUMENT (A377)

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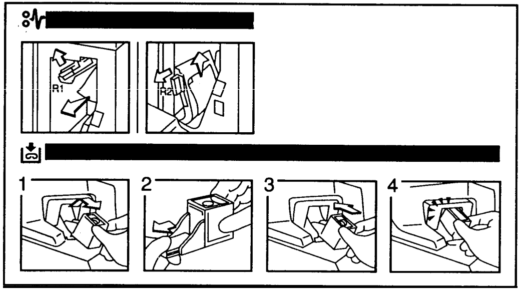
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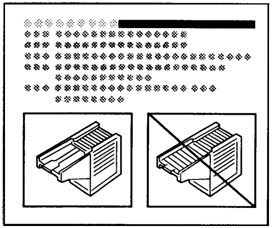
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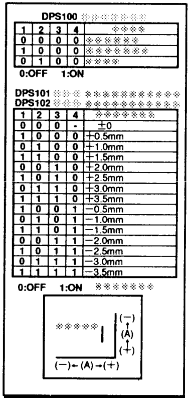
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0	0	1	0	+2.0mm
1	0	1	0	+2.5mm
0	1	1	0	+3.0mm
1	1	1	0	+3.5mm
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0	1	0	1	−1.0mm
1	1	0	1	−1.5mm
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1	0	1	1	−2.5mm
0	1	1	1	−3.0mm
1	1	1	1	−3.5mm

0:OFF 1:ON

10. DECAL AND DOCUMENT (A377)

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3	A377 1870	Decal - R1	1
4	A377 1875	Decal - R2	1
5	A377 1840	Decal - Service	1

Index No.	Part No.	Description	Q'ty Per Assembly

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0951 4006B	Philips Screw With Washer - M4x6	7-111
0951 4006B	Philips Screw With Washer - M4x6	11-107
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0951 4008B	Philips Screw With Washer - M4x8	19-104
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0965 3008B	Tapping Screw With Washer - M3x8	15-106
0965 3008B	Tapping Screw With Washer - M3x8	17-107
1005 0944	Stepping Motor Cushion	19-107
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1005 0946	Stepping Motor Cushion	17-113
1005 0946	Stepping Motor Cushion	17-115

Part No.	Description	Page and Index No.
1102 4473	CT Connector - 2P	19-113
1102 4924	CT Connector - 4P	7-112
1102 5194	Connector - 7P	13-108
1105 0134	Locking Support	19-112
1105 0160	Clamp	19-116
1105 0196	Harness Clamp	7-103
1105 0234	Clamp	11-108
1105 0291	Wire Saddle	11-109
1105 0310	Wire Clamp	13-107
1105 0310	Wire Clamp	19-102
1105 0310	Wire Clamp	21-102
1106 0193	Bushing - 7.9mm	7-102
1106 0193	Bushing - 7.9mm	9-104
1106 0193	Bushing - 7.9mm	13-105
1107 0748	Fuse - 2A 250V	19-115
1107 0752	Fuse - 5A 250V	19-114
1204 2334	Safety Switch - FA1 L-AA20	7-110

DF60 (A376)

PARTS CATALOG

INTRODUCTION

This chapter instructs you the numbers and names of this parts on this machine.

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1 Exterior (A376) 4
2. Original Feed Section1(A376). 6
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7. Electrical Section (A376) 16
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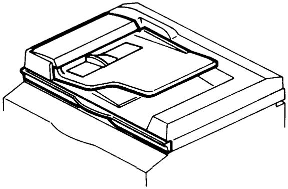
LOCATION OF UNIT

1. EXTERIOR (A376)



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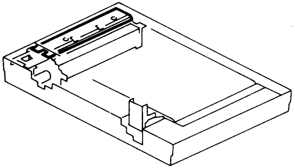
2. ORIGINAL FEED SECTION 1 (A376)



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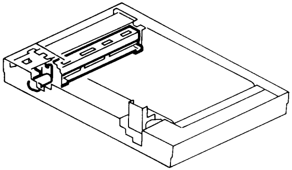
3. ORIGINAL FEED SECTION 2 (A376)



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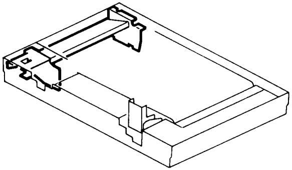
4. ORIGINAL FEED SECTION 3 (A376)



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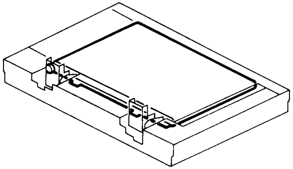
5. TRANSPORT SECTION (A376)



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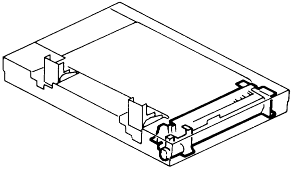
6. INVERTER AND EXIT SECTION (A376)



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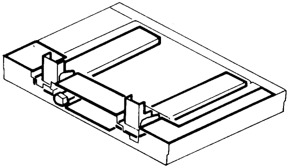
LOCATION OF UNIT

7. ELECTRICAL SECTION (A376)



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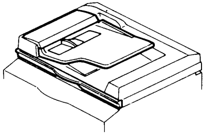
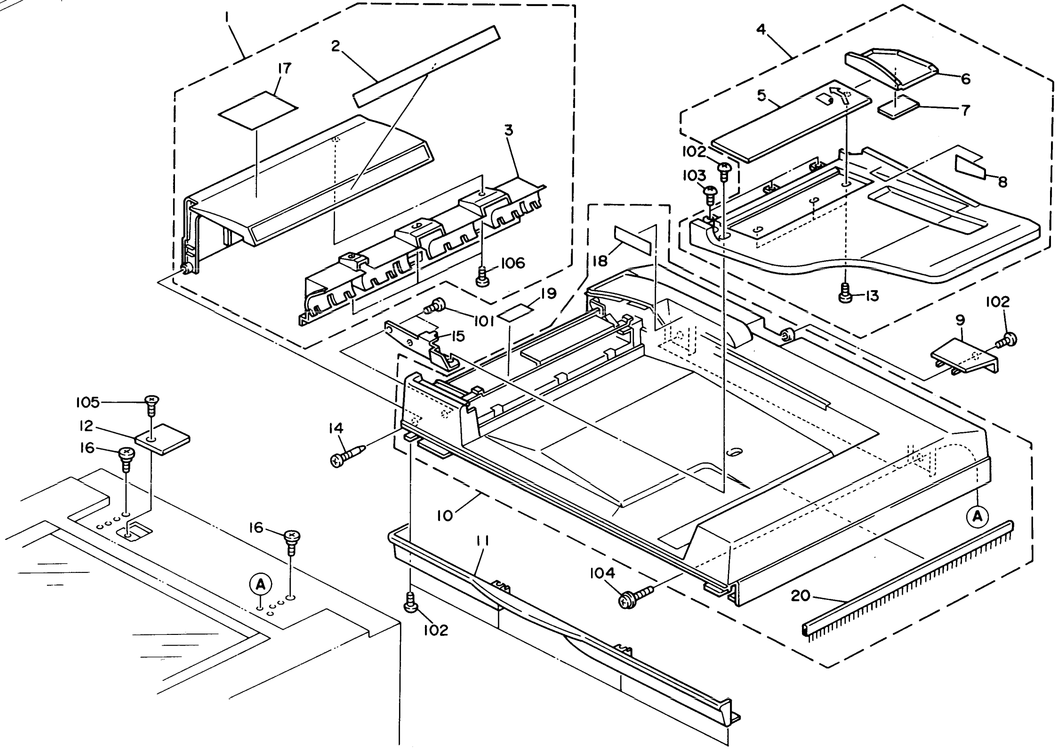
1. EXTERIOR (A376)





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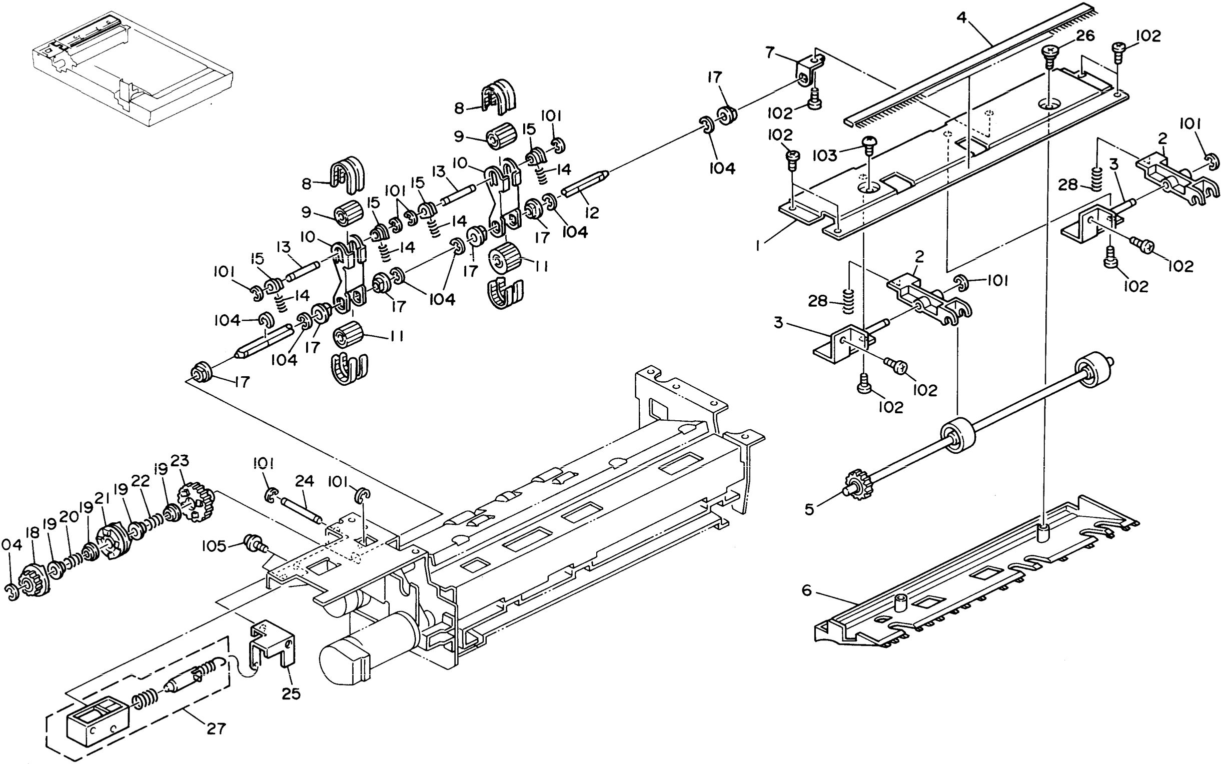
1. EXTERIOR (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 4543	Left Cover - LT	1
1	A376 4541	Left Cover - A4	1
2	A376 6016	Decal - Original Size - LT	1
2	A376 6011	Decal - Original Size - A4	1
3	A376 1261	Inverter Guide	1
4	A376 4561	Original Table	1
5	A376 4581	Side Fence Rail	1
6	A376 4591	Side Fence	1
7	A376 4599	Side Fence Pad	1
8	A376 6021	Decal - Original Table	1
9	A376 4611	Main Board Cover	1
10	A376 4501	Upper Cover	1
11	A376 4521	Front Lower Cover	1
12	A096 1281	Rear Top Cover	1
13	5875 2088	Shoulder Screw - M4	3
14	5446 2824	Screw - Duplex Guide Plate	2
15	A376 4125	Grip Bracket	1
16	A376 4911	Stepped Screw - Left Hinge	2
17	A376 6031	Decal - Misfeed Removal	1
18	A376 4651	Indicator Panel	1
19	A376 6051	Decal - Paper Feed Guide	1
20	A376 3242	Antistatic Brush	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0344 0060F	Philips Truss Head Screw - M4x6	
103	0344 0080F	Philips Truss Head Screw - M4x8	
104	0951 5010B	Philips Screw With Washer - M5x10	
105	0972 4006W	Philips Polycarbonate Screw - M4x6	
106	0354 0060B	Screw - M4x6	

2. ORIGINAL FEED SECTION 1 (A376)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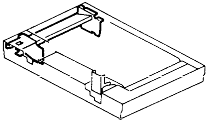
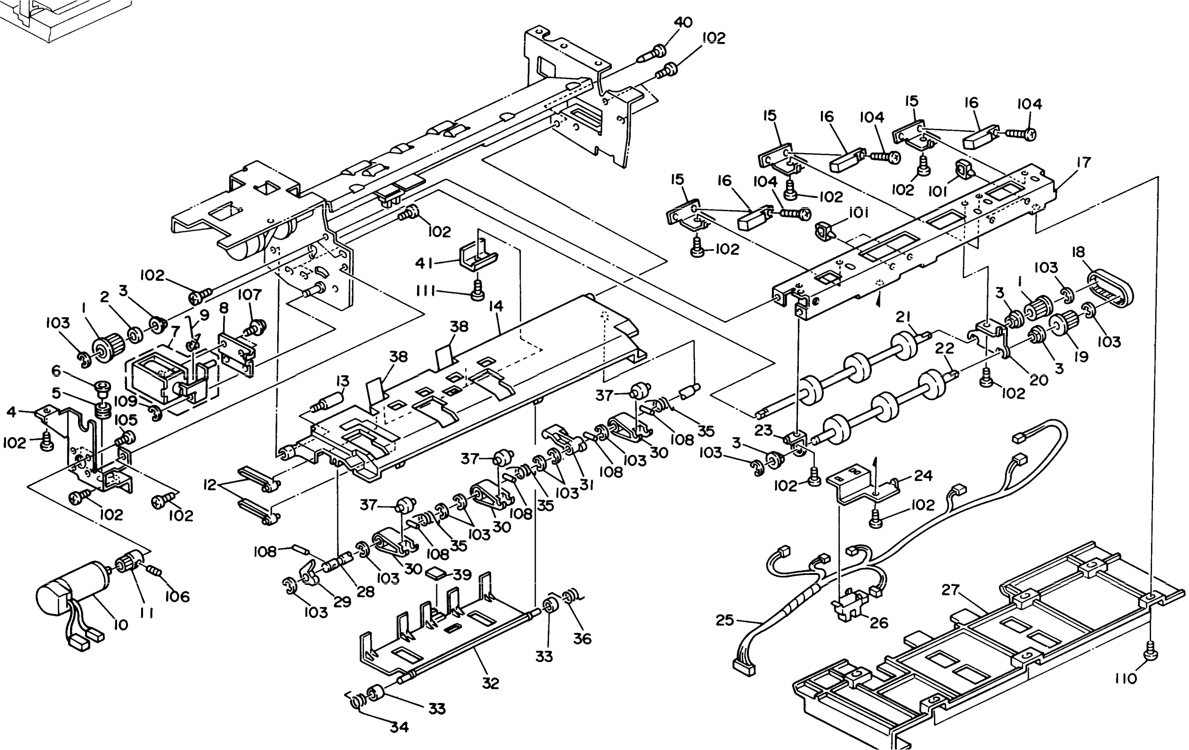
2. ORIGINAL FEED SECTION 1 (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 1235	Original Feed-out Stay	1
2	A376 1565	Idle Roller Arm	2
3	A376 1223	Bracket -idle Roller Arm	2
4	AA12 0032	Antistatic Brush	1
5	A376 1561	Idle Roller	1
6	A376 1211	Lower Guide Plate	1
7	A376 1215	Shaft Holder	1
8	A376 9501	Separation Belt - 4pcs/set	2
9	A376 1476	Timing Pulley-27Z	2
10	A376 1479	Transport Belt Bracket	2
11	A376 1477	Timing Pulley-27Z	2
12	A376 1499	Friction Belt Drive Shaft	1
13	A376 1483	Driven Shaft-Friction Belt	2
14	A376 1473	Pressure Spring- Friction Belt	4
15	A458 2161	Bushing-6x8x6	4
16	5447 2681	Snap Ring	4
17	5053 0447	Bushing-6mm	6
18	A376 1504	Gear-24Z	1
19	A376 1519	Spring Collar	4
20	A376 1518	Pressure Spring- Clutch Gear	1
21	A376 1512	Clutch Disk	1
22	A376 1517	Pressure Spring - Clutch Gear	1
23	A376 1496	Clutch Gear	1
24	A376 1537	Lever Shaft	1
25	A376 1521	Solenoid Lever - Friction Belt	1
26	AA14 3062	Shoulder Screw - M4	1
27	A376 1535	DC Solenoid - 24V 850GF	1
28	A376 1567	Arm Pressure Spring	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0720 0030B	Retaining Ring - M3	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0344 0060F	Philips Truss Head Screw - M4x6	
104	0720 0040B	Retaining Ring - M4	
105	0951 3004B	Philips Screw With Flat Washer - M3x4	

3. ORIGINAL FEED SECTION 2 (A376)

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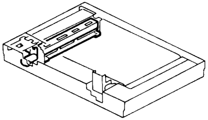
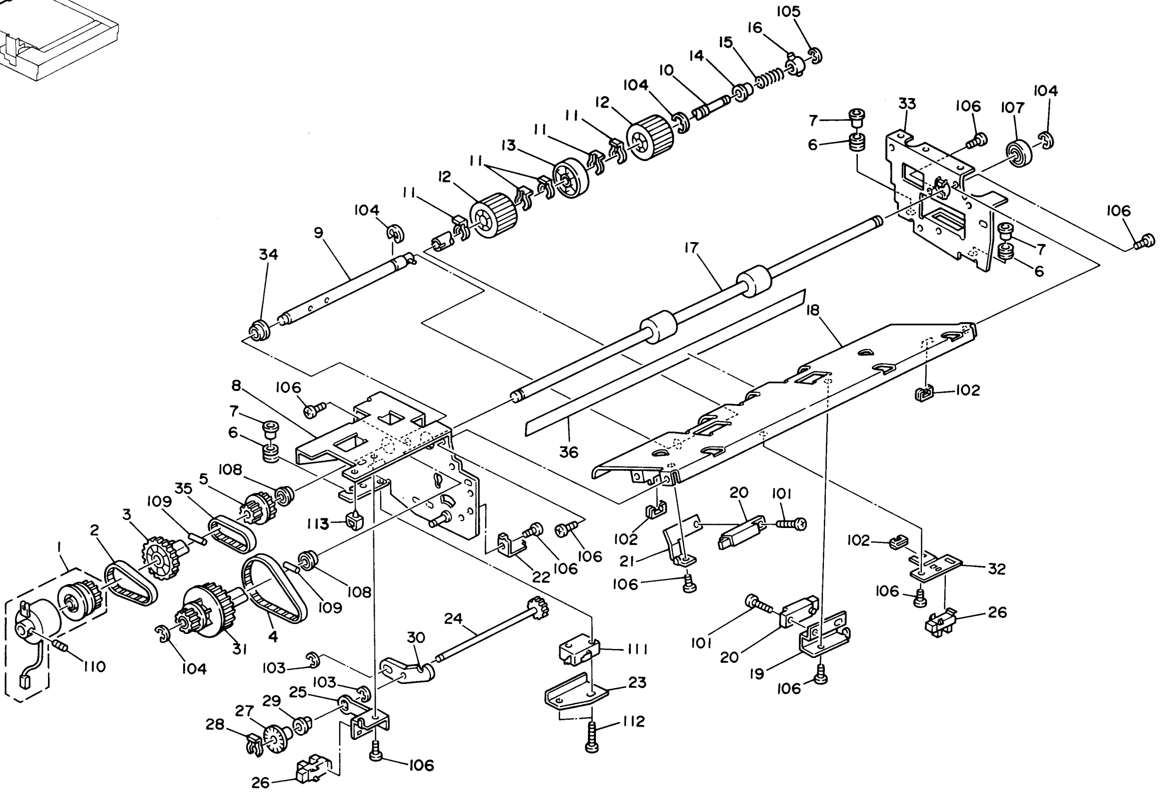
3. ORIGINAL FEED SECTION 2 (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 1291	Rear Timing Pulley	2
2	A376 1295	Spacer - M6x10X5	1
3	5053 0447	Bushing - 6mm	4
4	A376 1139	Feed-in Motor Bracket	1
5	A376 4132	Cushion - T1,6	1
6	A376 4137	Cushion Collar	1
7	A376 1384	Rear Lever - Original Stopper	1
8	A376 1385	Stopper Solenoid Bracket	1
9	A376 1382	Release Spring	1
10	AX06 0082	Belt Drive Motor - DC19W	1
11	A376 1615	Timing Pulley - 22Z	1
12	A376 1259	Sensor Feeler	2
13	A469 3350	Guide Stud	1
14	A376 1250	Upper Registration Guide	1
15	A376 1189	Right Bracket - Paper Size Sensor	3
16	AW01 0027	Photosensor - ON2530 CT	3
17	A376 1141	Upper Paper Feed Stay	1
18	A376 1319	Timing Belt - B60S2M98	1
19	A376 1292	Front Timing Pulley	1
20	A376 1145	Front Bracket - Pick-up Roller	1
21	A376 1311	Rear Pick-up Roller	1
22	A376 1283	Pick-up Roller	1
23	A376 1149	Pick-up Relay Roller Bracket	1
24	A376 1147	Original Sensor Bracket	1
25	A376 5751	Sensor Harness	1
26	AW02 0021	Photointerruptor - 175487-3	1
27	A376 1245	Entrance Original Guide	1
28	A376 1331	Original Pressure Shaft	1
29	A376 1363	Front Lever - Original Stopper	1
30	A376 1347	Original Pressure Arm	3
31	A376 1355	Original Stopper Arm	1
32	A376 1255	Original Stopper	1
33	A376 1257	Spacer - M4x6x6	2
34	A376 1265	Pressure Spring	1
35	A376 1335	Release Spring	3

Index No.	Part No.	Description	Q'ty Per Assembly
36	A376 1264	Pressure Spring	1
37	A376 1343	Original Pressure Roller	3
38	A376 1252	Feed Roller Guide	2
39	A376 3541	Solenoid Cushion	1
40	5446 2824	Screw - Duplex Guide Plate	1
41	A376 1253	Holder - Feed Roller Guide	2
101	1105 0229	Clamp	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0720 0040B	Retaining Ring - M4	
104	0313 0100B	Philips Pan Head Screw - M3x10	
105	0313 0060B	Philips Pan Head Screw - M3x6	
106	0574 0050E	Hexagon Headless Set Screw - M4x5	
107	0951 3006B	Philips Screw With Flat Washer-M3x6	
108	0632 0100	Parallel Pin - M2x10	
109	0720 0030B	Retaining Ring - M3	
110	0344 0080F	Philips Truss Head Screw - M4x8	
111	0414 0082B	Binding Self Tapping Screw - M4x8	

4. ORIGINAL FEED SECTION 3 (A376)

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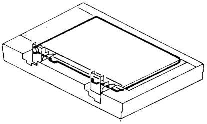
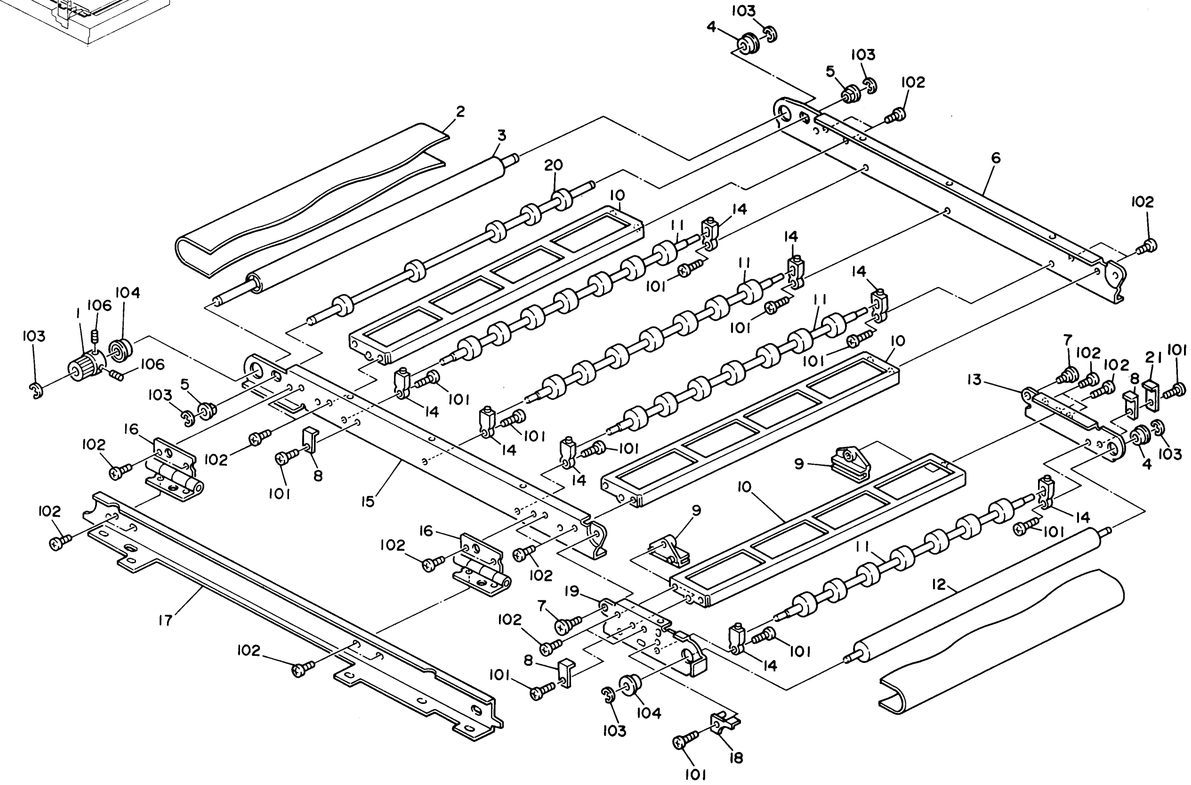
4. ORIGINAL FEED SECTION 3 (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 1427	Feed-in Clutch	1
2	A376 1553	Timing Belt - B60S3M144	1
3	A376 1432	Gear - Z46	1
4	A376 1623	Timing Belt - B60S2M186	1
5	A376 1419	Timing Pulley - 22Z/23Z	1
6	A376 4131	Cushion - T1	3
7	A376 4137	Cushion Collar	3
8	A376 1121	Rear Side Plate	1
9	A376 1415	Feed Roller Drive Shaft	1
10	A376 1457	Feed Roller Driven Shaft	1
11	5215 2621	Snap Ring - M6	5
12	A376 1445	Feed Roller	2
13	A376 1447	Middle Feed Roller	1
14	A376 1465	Feed Roller Bushing	1
15	A376 1467	Feed Roller Pressure Spring	1
16	A376 1461	Feed Roller Bushing	1
17	A376 1545	Idle Roller	1
18	A376 1160	Inner Separation Guide	1
19	A376 1197	Left Bracket - Paper Size Sensor	1
20	AW01 0027	Photosensor - ON2530 CT	2
21	A376 1193	Registration Sensor Bracket	1
22	A376 1137	Magnet Catch Bracket	1
23	A376 1134	Safety Switch Bracket	1
24	A376 1589	Encoder Shaft	1
25	A376 1597	Encoder Bracket	1
26	AW02 0021	Photointerruptor - 175487-3	2
27	A376 1585	Encoder	1
28	5206 2686	Snap Ring	1
29	H014 2131	Bushing - M4	1
30	A376 1593	Encoder Arm	1
31	A376 1549	Timing Pulley - 60Z/20Z	1
32	A376 1195	Registration Sensor Bracket	1
33	A376 1115	Front Side Plate	1
34	5053 0223	Bushing - 8mm	1
35	A376 1423	Timing Belt - B60S2M126	1
36	A376 1187	Separation Guide Mylar	1
101	0313 0100B	Philips Pan Head Screw - M3x10	
102	1105 0328	Harness Clamp - ES-0505	
103	0720 0030B	Retaining Ring - M3	
104	0720 0060B	Retaining Ring - M6	
105	0720 0040B	Retaining Ring - M4	
105	0720 0040B	Retaining Ring - M4	
106	0314 0060B	Philips Pan Head Screw - M4x6	
107	0740 3008	Ball Bearing - 8x22x7	
108	0742 3808	Ball Bearing - 8x16x5	
109	0632 0120	Parallel Pin - M2x12	
110	0574 0050E	Hexagon Headless Set Screw - M4x5	
111	1204 1123	Microswitch	
112	0313 0140B	Philips Pan Head Screw - M3x14	
113	1105 0310	Wire Clamp	

5. TRANSPORT SECTION (A376)





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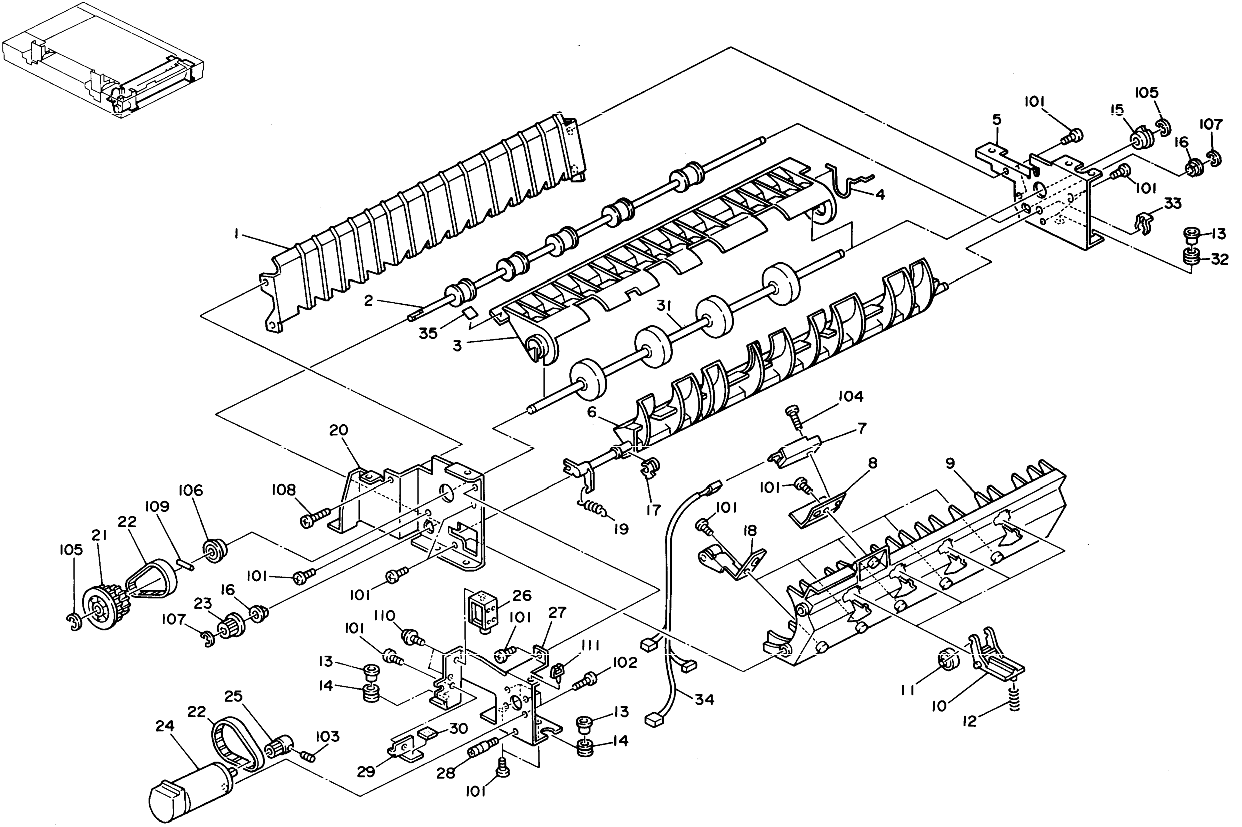
5. TRANSPORT SECTION (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 2521	Timing Pulley - 20Z	1
2	A376 2195	Transport Belt	1
3	A376 2091	Belt Drive Roller	1
4	A422 1078	Bushing - 6x12x4mm	2
5	5053 0447	Bushing - 6mm	2
6	A376 2117	Front Side Plate	1
7	AA14 3062	Shoulder Screw - M4	2
8	A376 2155	Transport Unit Upper Stopper	3
9	A376 2147	Transport Belt Guide	2
10	A376 2128	Transport Stay	3
11	A376 2096	Belt Pressure Roller	4
12	A376 2132	Belt Driven Roller	1
13	A376 2152	Front Tension Bracket	1
14	A376 2163	Presure Roller Bushing	8
15	A376 2125	Rear Side Plate	1
16	A376 2211	Transport Unit Hinge	2
17	A376 4121	Rear Frame	1
18	A376 2157	Transport Unit Rear Stopper	1
19	A376 2156	Rear Tension Bracket	1
20	A376 2092	Belt Support Roller	1
21	A376 2158	Stopper Spacer	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0080B	Philips Pan Head Screw - M4x8	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0720 0040B	Retaining Ring - M4	
104	0742 3808	Ball Bearing - 8x16x5	

6. INVERTER AND EXIT SECTION (A376)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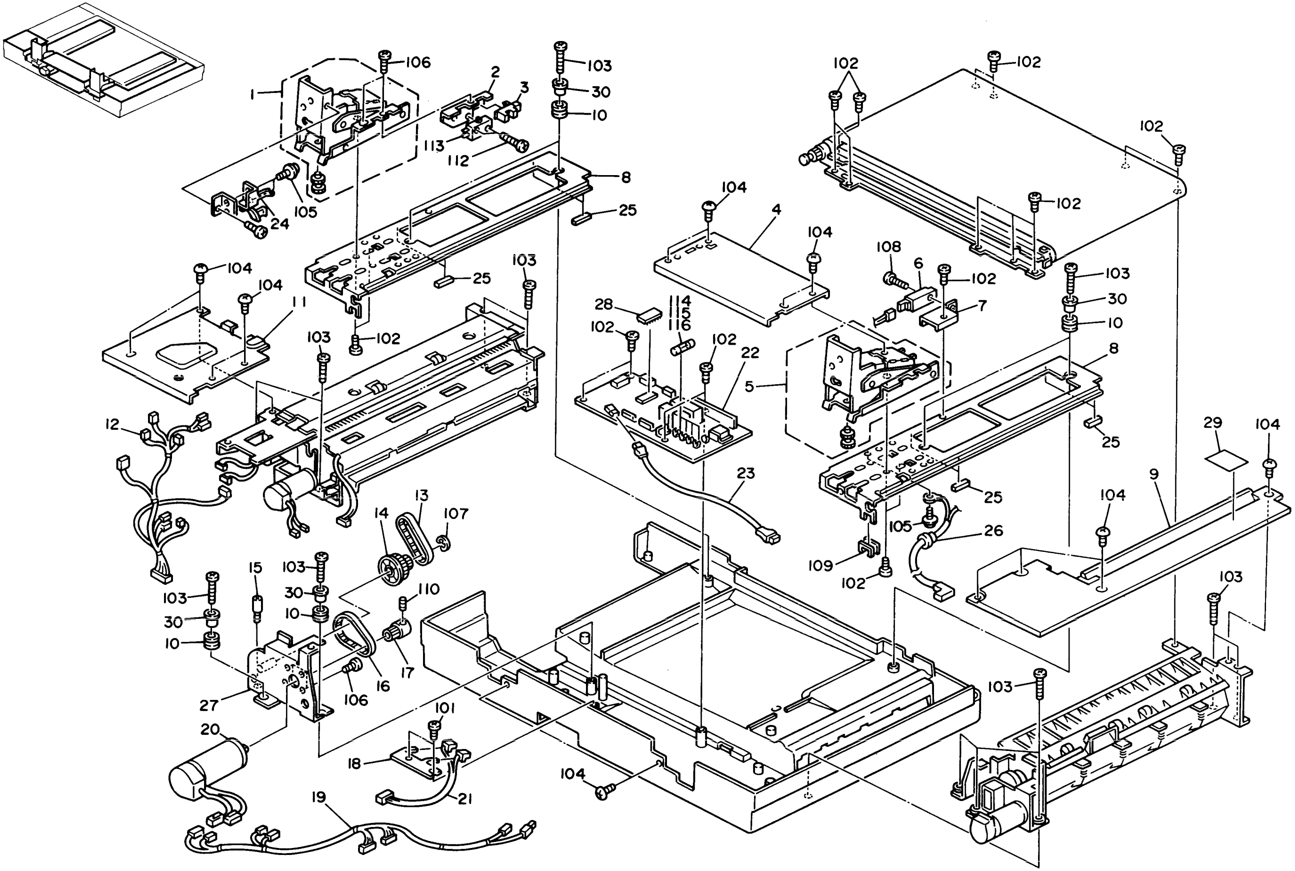
6. INVERTER AND EXIT SECTION (A376)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A376 3145	Inverter Guide Plate	1
2	A376 3126	Feed-out Roller	1
3	A376 3137	Inverter Guide	1
4	A376 3537	Inverter Guide Spring	1
5	A376 3111	Front Side Plate	1
6	A376 3142	Inverter Pawl	1
7	AW01 0027	Photosensor - ON2530 CT	1
8	A376 3161	Sensor Bracket	1
9	A376 3147	Upper Feed-out Guide	1
10	A376 3154	Inverter Roller Arm	4
11	A376 3153	Lower Driven Roller	4
12	A376 3611	Feed-out Roller Spring	4
13	A376 4137	Cushion Collar	3
14	A376 4132	Cushion - T1,6	2
15	5420 4860	Bushing - 8mm	1
16	5053 0447	Bushing - 6mm	2
17	A376 3172	Inverter Pawl Bushing	1
18	A376 3211	Feed-out Driven Roller	5
19	A376 3612	Inverter Lever Spring	1
20	A376 3121	Rear Side Plate	1
21	A376 3515	Timing Pulley - 48Z/22Z	1
22	A376 3598	Timing Belt - B40S2M152	2
23	A376 3516	Timing Pulley -21 Z	1
24	AX06 0092	DC Motor - DC24V 19W	1
25	A376 3532	Timing Pulley - 18Z .	1
26	A376 3530	Inverter Solenoid	1
27	A376 3512	Feed-out Motor Bracket	1
28	A409 1150	Spring Anchor	1
29	A376 3531	Solenoid Stopper	1
30	A376 3541	Solenoid Cushion	1
31	A376 3125	Inverter Roller	1
32	A376 4131	Cushion - T1	1
33	5447 2681	Snap Ring	1
34	A376 5753	Feed-out Harness	1
35	A054 2977	Decal - Vertical Transport Guide	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0313 0060B	Philips Pan Head Screw - M3x6	
103	0574 0050E	Hexagon Headless Set Screw - M4x5	
104	0313 0100B	Philips Pan Head Screw - M3x10	
105	0720 0060B	Retaining Ring - M6	
106	0742 3808	Ball Bearing - 8x16x5	
107	0720 0040B	Retaining Ring - M4	
108	0314 0200B	Philips Pan Head Screw - M4x20	
109	0633 0160E	Pin - 3x16mm	
110	0951 3004B	Philips Screw With Flat Washer -M3x4	
111	1105 0199	Clamp	

7. ELECTRICAL SECTION (A376)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2	A376 4117	Reset Switch Bracket	1
3	AW02 0021	Photointerruptor - 175487-3	1
4	A376 4646	Lower Middle Cover	1
5	A376 4190	Right Hinge	1
6	AW01 0027	Photosensor - ON2530 CT	1
7	A376 4115	Feed-out Sensor Bracket	1
8	A376 4111	Hinge Stay	2
9	A376 4621	Lower Exit Cover	1
10	A376 4132	Cushion - T1,6	6
11	A376 4641	Left Lower Cover	1
12	A376 5752	Solenoid Harness	1
13	AA04 3235	Timing Belt - B60S3M201	1
14	A376 2524	Timing Pulley - 60Z/20Z	1
15	A376 2514	Joint Stud	1
16	AA04 3096	Timing Belt - 4X160	1
17	A376 1615	Timing Pulley - 22Z	1
18	A376 4119	Led Bracket	1
19	A376 5754	Motor Relay Harness	1
20	AX06 0092	DC Motor- DC24V 19W	1
21	A376 5757	LED Harness	1
22	A376 5551	Main Board	1
23	AW03 0032	Optical Fiber	1
24	A376 4916	Reset Switch Lever	1
25	5446 1665	Rubber Pad - Exposure Glass	8
26	A376 5755	Interface Harness	1
27	A376 2511	Belt Drive Motor Bracket	1
28	A376 6821	IC - AM27C256-1500DC	1
29	A376 6041	Decal - Misfeed Removal	1
30	A376 4137	Cushion Collar	6

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103	0314 0100B	Philips Pan Head Screw - M4x10	
104	0344 0060F	Philips Truss Head Screw - M4x6	
105	0951 4008B	Philips Screw With Washer - M4x8	
106	0313 0060B	Philips Pan Head Screw - M3x6	
107	0720 0060B	Retaining Ring - M6	
108	0313 0100B	Philips Pan Head Screw - M3x10	
109	1105 0328	Harness Clamp - ES-0505	
110	0574 0050E	Hexagon Headless Set Screw - M4x5	
111	1106 0289	Bushing - SR-5N-1	
112	0313 0140B	Philips Pan Head Screw - M3x14	
113	1204 0768	Microswitch	
114	1107 0750	Fuse -3.15A 250V	
115	1107 0384	Fuse - 0.63A	
116	1107 0404	Fuse - 0.3A 250V	

8. DECAL AND DOCUMENT (A376)

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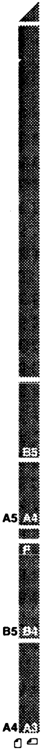
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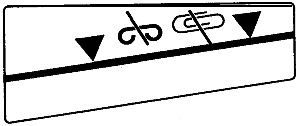

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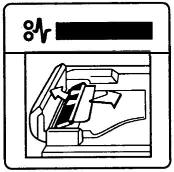

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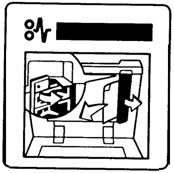

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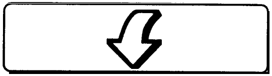

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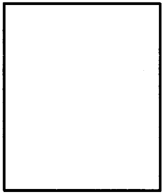

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1	A376 6011	Decal - Original Size - A4	1
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DH400 (A378)

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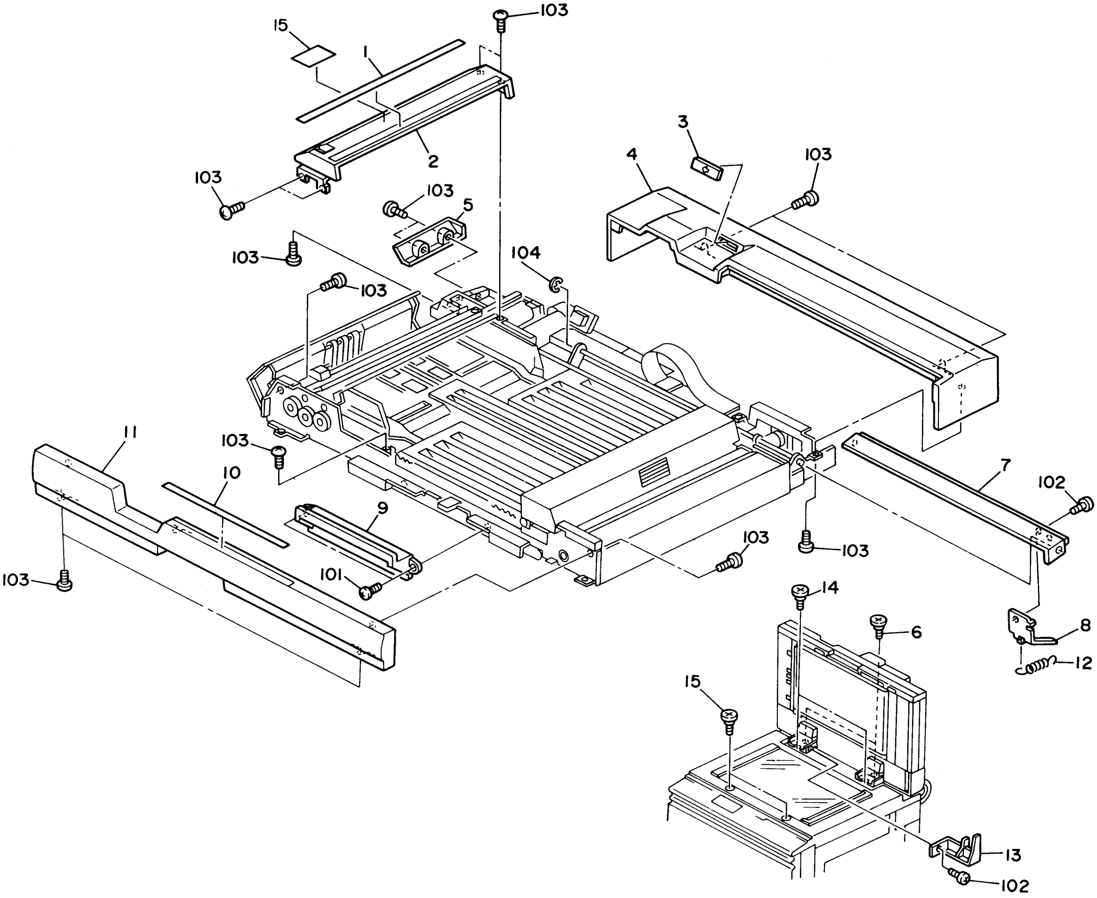

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1. EXTERIOR (A378)

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5	A378 3516	Lower Rear Cover	1
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7	A378 3591	Slide Support Cover	1
8	A378 3148	Switch Actuator	1
9	A499 3621	Grip - Magnet Catch	1
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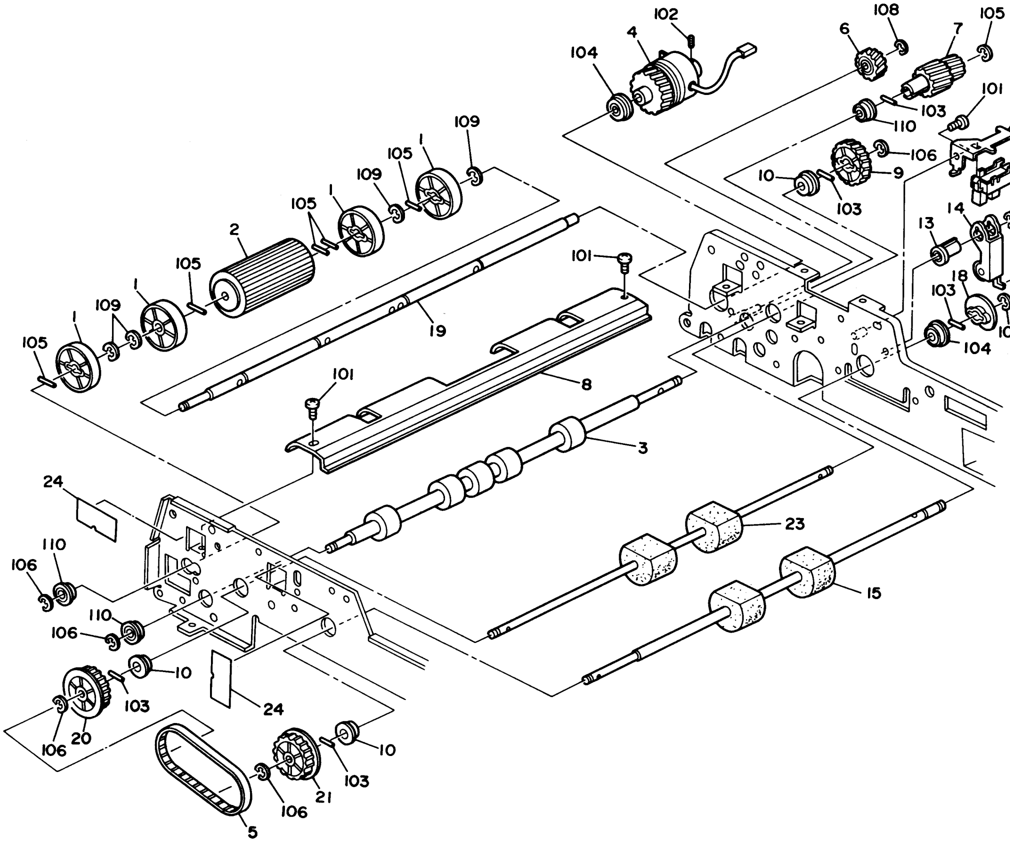
104	0720 0040E	Retaining Ring - M4	

2. FEED-IN SECTION (A378)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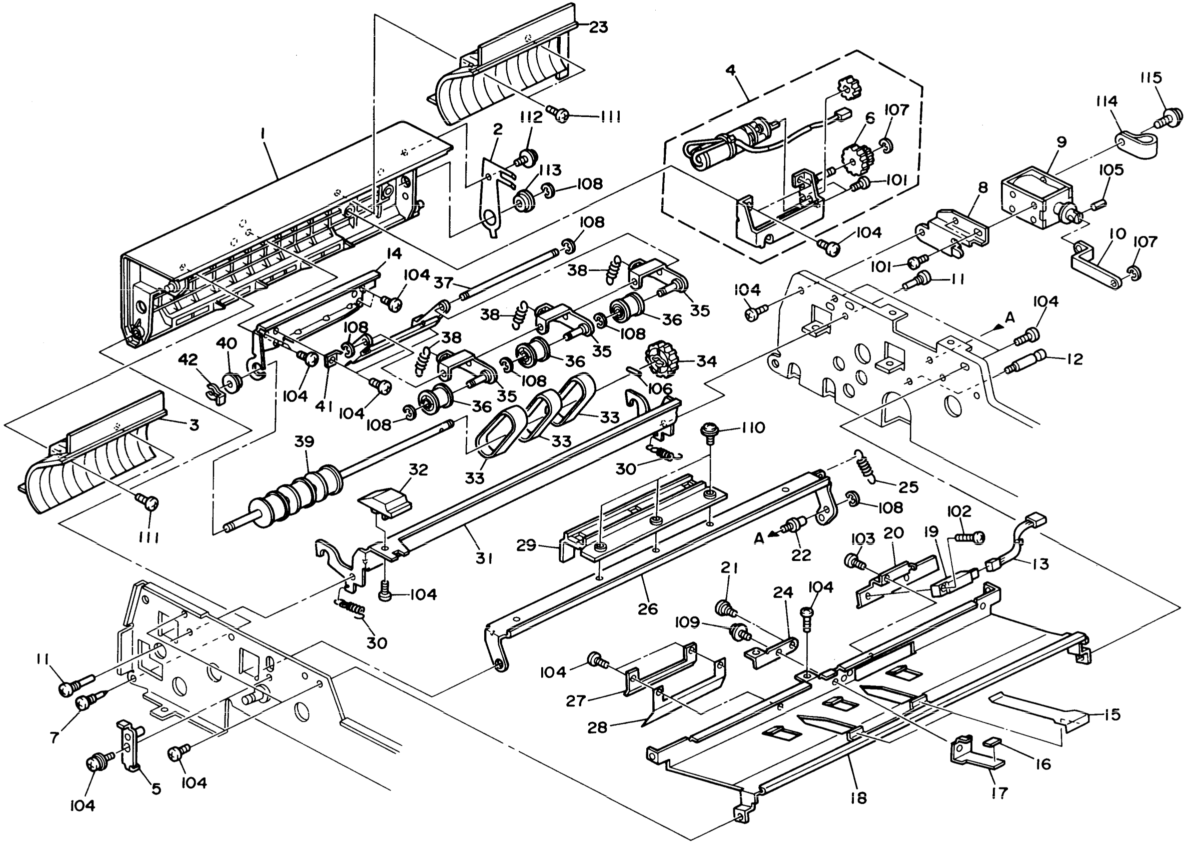
2. FEED-IN SECTION (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 1212	Guide Roller	4
2	A378 1211	Separation Roller	1
3	AF02 0161	Feed-out Roller	1
4	A378 1221	Separation Clutch	1
5	A378 1084	Timing Belt - 192XL	1
6	AB01 1086	Gear - 20Z	1
7	A378 1094	Gear - 19Z/22Z	1
8	A499 1224	Inner Separation Guide	1
9	A378 1091	Gear - 32Z	1
10	A422 1078	Bushing - 6x12x4mm	11
11	A378 1467	Sensor Bracket	1
12	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	3
13	A499 1465	Bushing - 5m	1
14	A499 1461	Cam Lever	1
15	AF02 3002	1st Pick-up Roller	1
16	AA06 0279	Pressure Spring	1
17	5936 1145	Position Encoder	1
18	A499 1458	Pick-up Roller Cam	1
19	A499 1215	Separation Drive Shaft	1
20	A378 1096	Pulley - 24Z	2
21	A378 1095	Pulley -18Z	3
23	AF02 3003	2nd Pick-up Roller	1
24	A378 3133	seal	4

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060W	Philips Pan Head Screw - M4x6	
102	0574 0040E	Hexagon Headless Set Screw - M4x4	
103	0632 0100E	Pin - M2x10	
104	0805 3291	Ball Bearing - 8x16x5mrn	
105	0632 0140E	Parallel Pin - M2x14	
106	0720 0040E	Retaining Ring - M4	
108	0720 0060E	Retaining Ring - M6	
109	0720 0070E	Retaining Ring - M7	
110	0741 3506	Bail Bearing - 6x12x4 mm	

3. SEPARATION SECTION (A378)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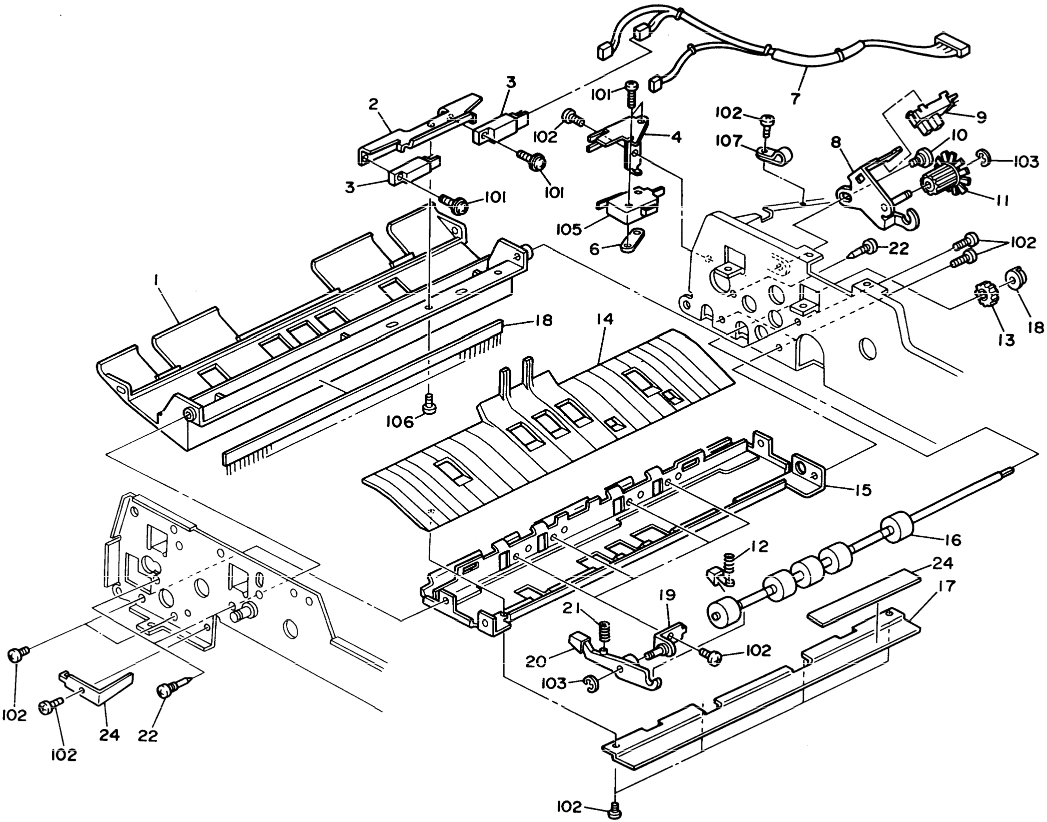
3. SEPARATION SECTION (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 1111	Left Cover	1
2	A499 1153	Grouding Plate	1
3	A499 1126	Separation Guide	1
4	A499 1120	Separation Belt Holder	1
5	A499 1326	Holder - Original Stopper Bracket	1
6	AB01 0049	Gear - 31Z	1
7	5446 2824	Screw - Duplex Guide Plate	5
8	A499 1331	Stopper Solenoid Bracket	1
9	A028 5876	Original Stopper Solenoid	2
10	A499 1332	Stopper Solenoid Lever	1
11	5415 4145	Stud	2
12	5403 1910	Spring Anchor - Stopper Lever	2
13	A499 5703	Harness - Original Sensor	1
14	A499 1123	Left Cover Bracket	1
15	A499 1317	Guide Seal	2
16	AA16 1022	Cushion	1
17	A499 1335	Stopper	1
18	A499 1305	Original Entrance Guide	1
19	A010 5700	Sensor	2
20	A499 1315	Original Sensor Bracket	1
21	H006 2171	Stepped Screw	1
22	A499 1325	Stud - M4x5	1
23	A378 1127	Rear Separation Guide	1
24	A499 1336	Stopper Positioning Plate	1
25	AA06 0277	Release Spring	1
26	A499 1321	Original Stopper Bracket	1
27	A499 1312	Separation Guide Bracket	1
28	A499 1313	Paper Guide Mylar	1
29	A499 1323	Original Stopper	1
30	AA06 0278	Release Spring	2
31	A499 1341	Release Lever - Separation Unit	1
32	A499 1346	Knob - Release Lever	1
33	A499 9500	Separation Belt - 3Pcs/Set	3
34	AB01 0050	Gear - 32Z	1
35	A499 1131	Tension Roller Holder	3

Index No.	Part No.	Description	Q'ty Per Assembly
36	A499 1135	Tension Roller	3
37	A499 1129	Shaft - Tensionroller Holder	1
38	AA06 0276	Spring	3
39	AF02 0167	Drive Roller Separation Belt	1
40	A422 1078	Bushing - 6x12x4mm	11
41	A499 1122	Shaft Holder	1
42	5447 2681	Snap Ring	1
101	0313 0040W	Philips Pan Head Screw - M3x4	
102	0313 0060M	Philips Pan Head Screw - M3x6	
103	0313 0060W	Philips Pan Head Screw - M3x6	
104	0314 0060W	Philips Pan Head Screw - M4x6	
105	0623 0100E	Spring Pin - 3x10mm	
106	0632 0080E	Spring Pin -2 x 8mm	
107	0720 0030E	Retaining Ring - M3	
108	0720 0040E	Retaining Ring - M4	
109	0951 4008W	Philips Screw With Flat Washer-M4x8	
110	0951 3006W	Philips Screw With Fiat Washer-M3x6	
111	0951 4006W	Philips Screw With Flat Washer-M4x6	
112	0965 4006W	Tapping Screw - M4 x 6	
113	0741 3506	Bali Bearing - 6x12x4 mm	

4. FEED-OUT SECTION (A378)



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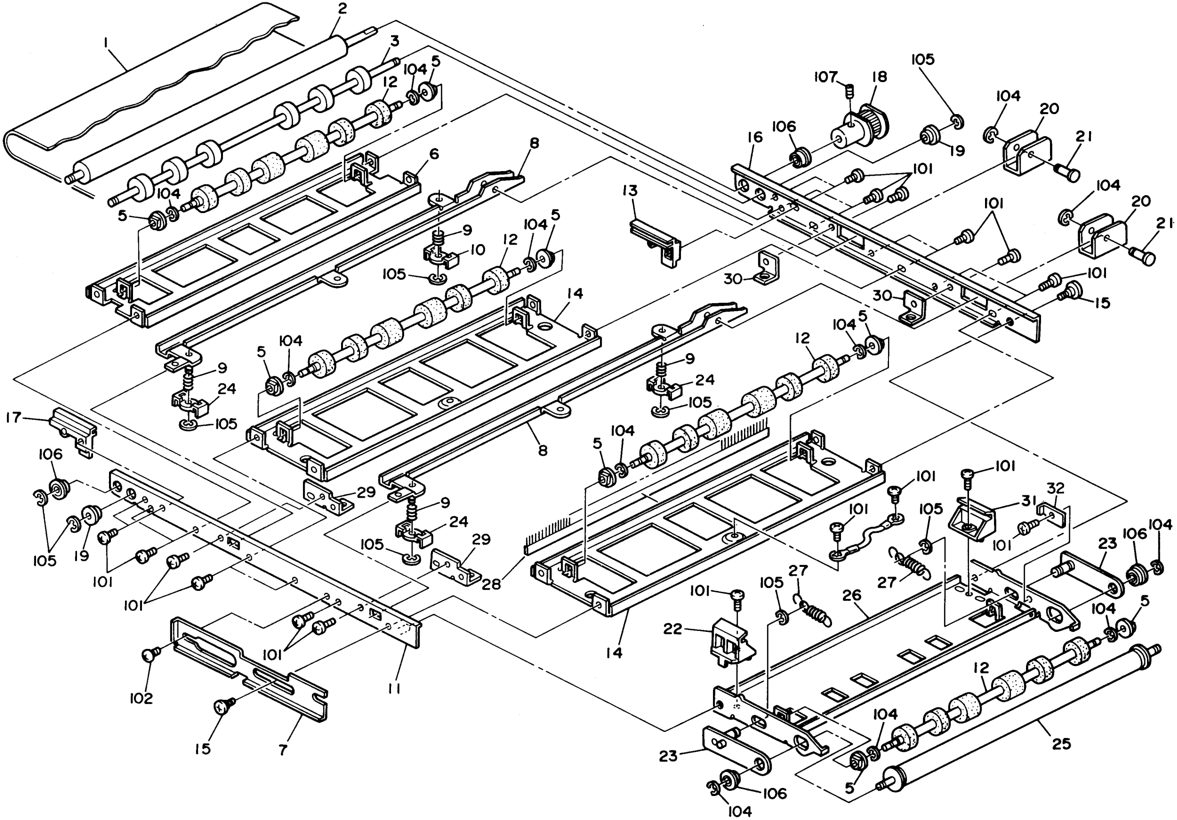
4. FEED-OUT SECTION (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 1272	Upper Feed Out Guide	1
2	A499 1274	Register Sensor Bracket	1
3	AW01 0025	Photosensor ON2530	4
4	A499 3142	Switch Bracket - Separation	1
5	A499 1379	Sensor Pad	1
6	5056 0509	Nut Plate - Microswitch	2
7	A499 5702	Registration Sensor Harness	1
8	A499 1371	Pulse Generator Bracket	1
9	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	3
10	A499 1378	Stepped Screw - M4x6	1
11	A499 1375	Pulse Generator	1
12	AA06 3151	Inner Pressure Spring	2
13	AB01 0051	Gear - 26Z	1
14	A499 1358	Lower Feedout Guide	1
15	A499 1351	Original Feed Out Stay	1
16	A378 1355	Idle Roller	1
17	A499 1356	Sensor Pad Plate	1
18	5875 2067	Bushing	1
19	A499 1361	Bracket - Idle Roller Arm	4
20	A499 1365	Idle Roller Arm	4
21	AA06 3152	Outer Pressure Spring	2
22	5446 2824	Screw - Duplex Guide Plate	5
23	A499 1275	Grouding Plate	1
24	A499 1379	Sensor Pad	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0313 0160B	Philips Pan Head Screw - M3x16	
102	0951 4006W	Philips Screw With Flat Washer-M4x6	
103	0720 0030E	Retaining Ring - M3	
104	0807 4111	Washer - 5.2x14x0.1 mm	
105	1204 1123	Microswitch	
106	0951 3010W	Philipsscrew With Flat Washer-M3x10	
107	1105 0008	Nylon Clip - 2n	

5. TRANSPORT SECTION (A378)



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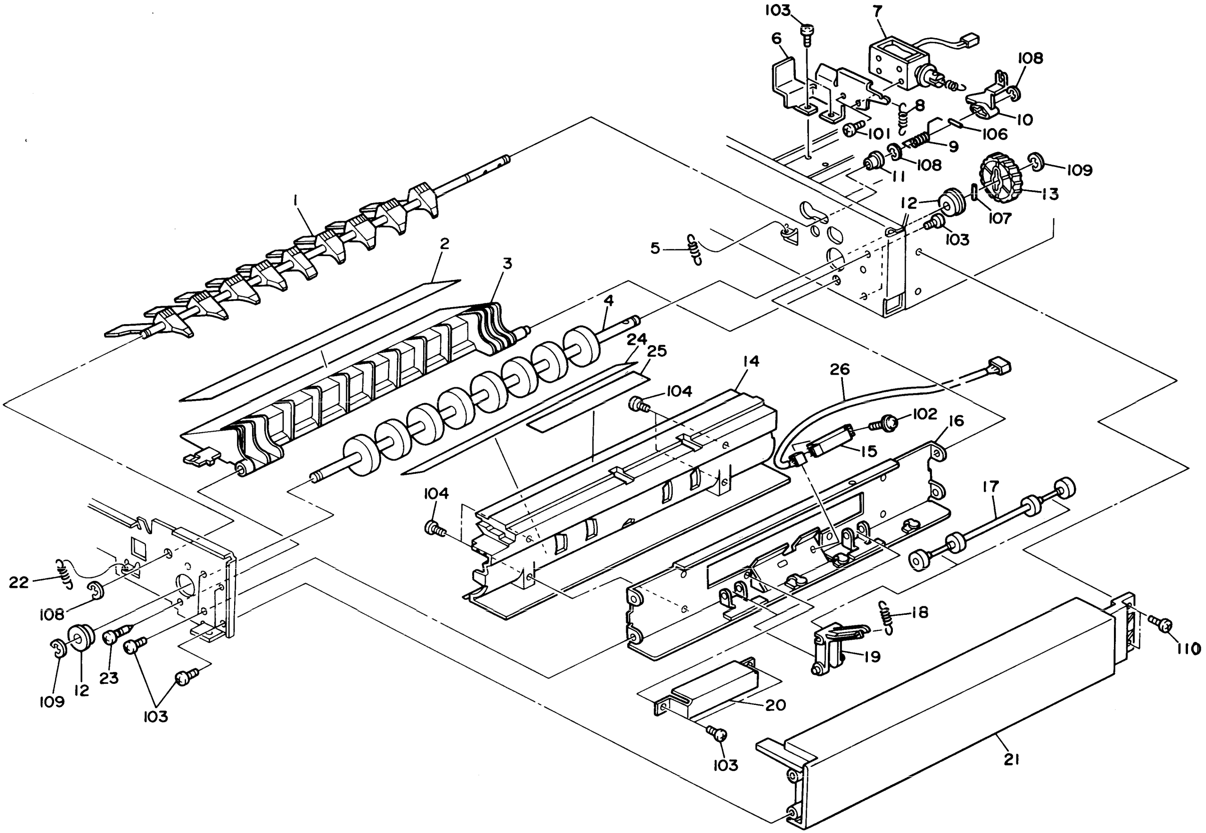
5. TRANSPORT SECTION (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A497 1125	Transport Belt	1
2	A378 1562	Drive Roller	1
3	AF02 0163	Belt Pressure Roller	1
4	A499 5707	Grouding Wire	1
5	A499 1616	Bushing - 4m	8
6	A499 1531	Left Stay	1
7	A499 1581	Support Plate - Release Bracket	1
8	A499 1545	Belt Unit Arm	2
9	AA06 3153	Pressure Spring	4
10	A499 1552	Bushing - 6m	1
11	A499 1511	Front Frame - Transport Belt	1
12	AF02 3001	Belt Support Roller	4
13	A378 1537	Belt Guide - Rear Left	1
14	A499 1532	Middle Stay	2
15	AA14 3062	Shoulder Screw - M4	2
16	A499 1520	Rear Frame - Transport Belt	1
17	A499 1536	Belt Guide - Front Left	1
18	A378 1555	Pulley -21Z	1
19	A422 1078	Bushing - 6x12x4mm	11
20	A499 1542	Belt Unit Hinge	2
21	A499 1556	Pin - 4x16	2
22	A499 1576	Right Belt Guide	1
23	A499 1571	Tension Plate	2
24	A499 1551	Bushing - 6m	3
25	A378 1563	Drive Roller	1
26	A378 1561	Belt Release Bracket	1
27	AA06 0286	Tension Spring	2
28	AA12 0032	Antistatic Brush	5
29	A499 1513	Front Pressure Plate	2
30	A499 1523	Rear Pressure Plate	2
31	A378 1577	Right Belt Guide	1
32	A378 1566	Tension Plate	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060W	Philips Pan Head Screw - M4x6	
102	0344 0060F	Philips Truss Head Screw - M4x6	
103	0632 0100E	Pin - M2x10	
104	0720 0030E	Retaining Ring - M3	
105	0720 0040E	Retaining Ring - M4	
106	0741 3506	Ball Bearing - 6x12x4 mm	
107	0574 0040E	Hexagon Headless Set Screw - M4x4	

6. INVERTOR SECTION (A378)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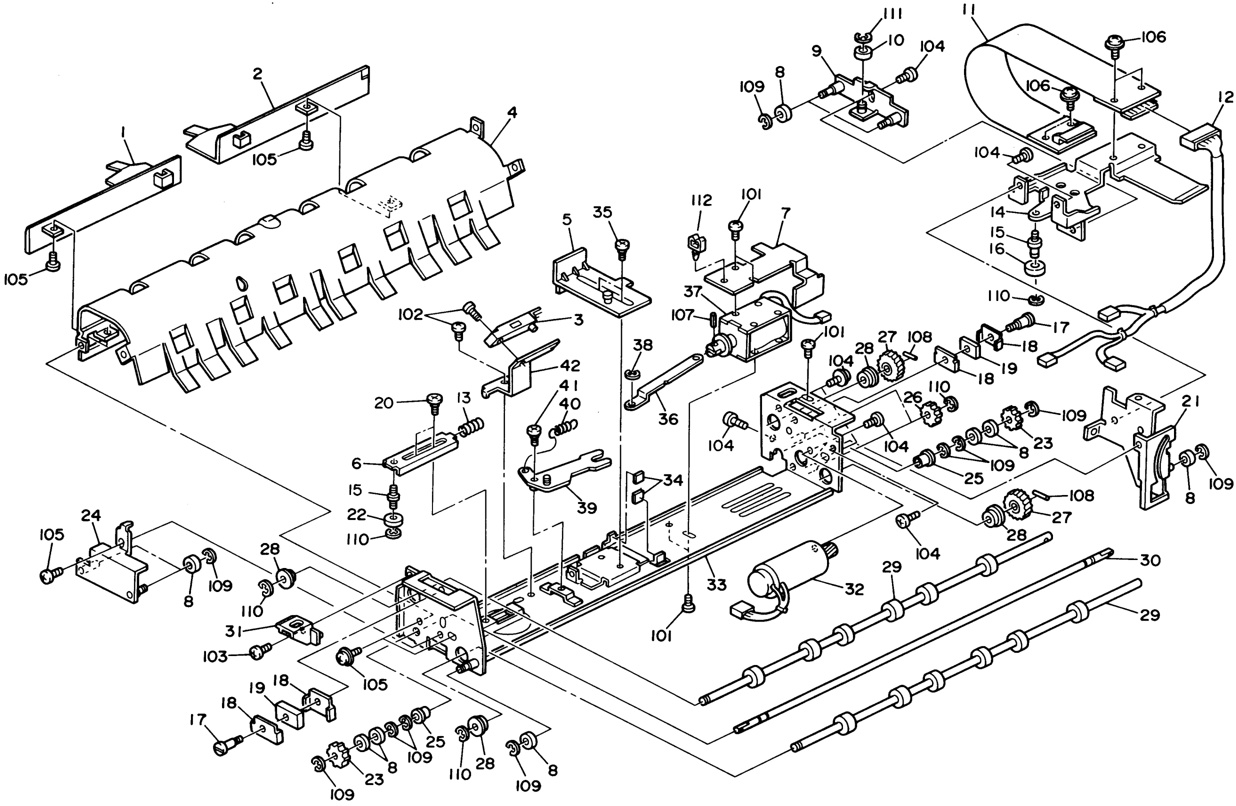
6. INVERTER SECTION (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 1751	Invertorpawls	1
2	A499 1712	Paper Guide Mylar	1
3	A499 1711	Invertor Guide Plate	1
4	AF02 0164	Invertor Roller	1
5	AA06 0280	Spring - Invertor Guide	1
6	A378 1761	Inverter Solenoid Bracket	1
7	A028 5876	Original Stopper Solenoid	2
8	AA06 0287	Spring - Invertor Lever	1
9	AA06 6054	Spring	1
10	A378 1752	Inverter Pawls	1
11	H014 3107	Bushing - M5	1
12	A422 1079	Bushing - 8x16x5mm	2
13	AB01 1098	Gear - 35Z	1
14	A499 1721	Invertor Guide	2
15	AW01 0025	Photosensor ON2530	4
16	A499 1735	Invertor Stay	1
17	AF02 2046	Idle Roller	1
18	AA06 0282	Pressure Spring	2
19	A499 1731	Idle Roller Arm	2
20	A499 1738	Inventor Sensor Cover	1
21	A378 3551	Right Cover	1
22	AA06 0343	Spring - Front Inverter Guide	1
23	5446 2824	Screw - Duplex Guide Plate	5
24	A378 1729	Paper Guide Mylar	1
25	A499 1746	Mylar - 128x18	1
26	A499 5708	Harness - Invertor Sensor	1
27	AA06 0283	Spring - Invertor Solenoid	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0313 0040W	Philips Pan Head Screw - M3x4	
102	0313 0160B	Philips Pan Head Screw - M3x16	
103	0314 0060W	Philips Pan Head Screw - M4x6	
104	0354 0080W	Philips Pan Head Screw - M4x8	
105	0623 0100E	Spring Pin - 3x10mm	
106	0632 0100E	Pin - M2x10	
107	0632 0140E	Parallel Pin - M2x14	
108	0720 0040E	Retaining Ring - M4	
109	0720 0060E	Retaining Ring - M6	
110	0354 0060D	Sunk Screw - 4x6	

7. EXIT SECTION 1 (A378)



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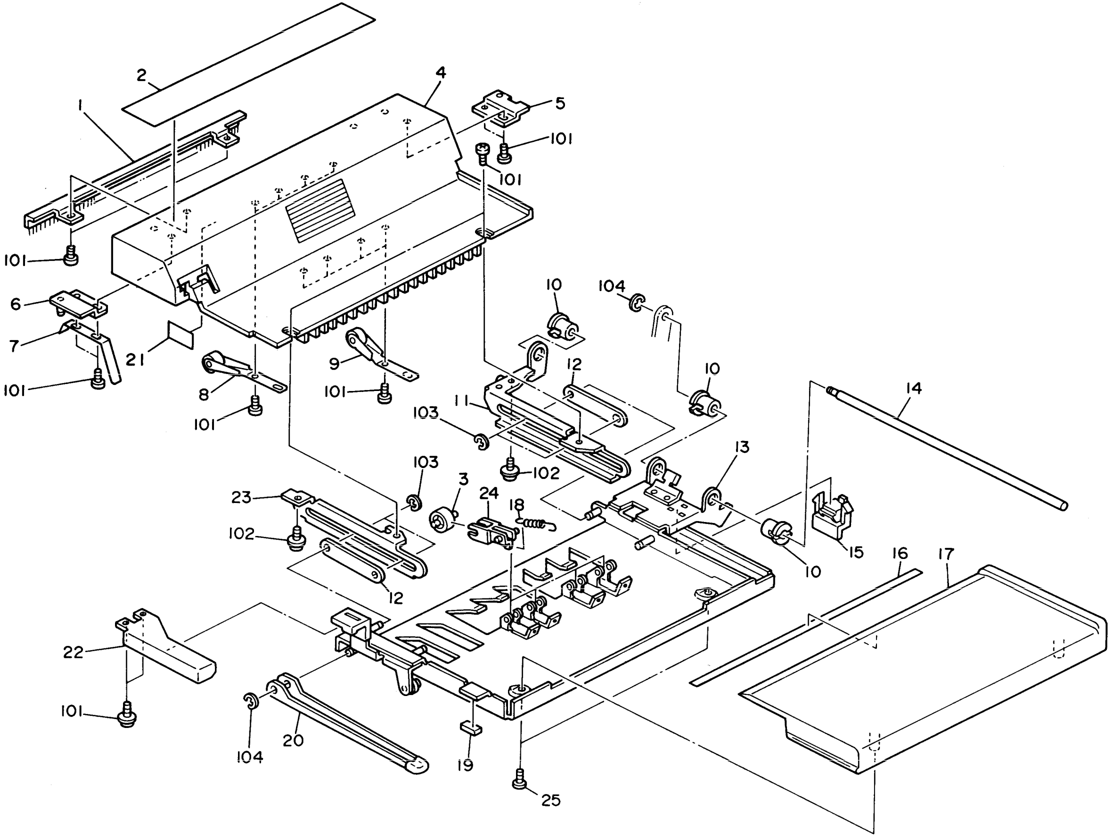
7. EXIT SECTION 1 (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 2201	Front End Fence	1
2	A499 2211	Rear End Fence	1
3	AW01 0025	Photosensor ON2530	4
4	A499 2198	Invertor Guide Plate	1
5	A499 2131	Edn Fence - Center	1
6	A499 2121	Slider Lock	1
7	A499 2246	Harness Cover	1
8	A499 2181	Fixing Roller	10
9	A499 2161	Rear Fixing Plate	1
10	A454 1172	Collar - M6	1
11	A499 5501	Stapler Harness - 1	1
12	A499 5704	Exit Harness	1
13	AA06 3154	Spring - Lock	1
14	A378 2166	Harness Bracket	1
15	AA14 3282	Stud - M4	2
16	A378 2184	Locking Roller	1
17	AA14 3284	Stepped Screw - M3x11	2
18	A499 2177	Magnet Holder	4
19	A499 2176	Exit Cover Magnet	2
20	AA14 0060	Stepped Screw - M3x5	2
21	A378 2155	Guide Bracket	1
22	A499 2184	Locking Roller	1
23	A499 2189	Gear - 28Z	2
24	A499 2151	Front Fixing Plate	1
25	AA08 0004	Bushing - 4x6x5	2
26	A378 2133	Gear - 30Z	2
27	A378 2132	Gear - 31Z	2
28	A422 1078	Bushing - 6x12x4mm	11
29	AF02 0165	Exit Roller	2
30	A499 2191	Slider Pinion Shaft	1
31	A499 2241	Positioning Holder	1
32	A409 1234	Exit Motor - DC 9W	1
33	A378 2111	Exit Frame	1
34	A378 2131	Cushion	2
35	H006 2171	Stepped Screw	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	A499 2141	End Fence Link	1
37	A499 5451	Push Plate Solenoid	1
38	AA14 3284	Stepped Screw - M3x11	2
39	A499 2142	End Fence Lever	1
40	AA06 0284	Spring - Pick-up	1
41	AA14 0065	Stepped Screw - M3x6	1
42	A499 2146	Exit Screw Bracket	1
101	0313 0040W	Philips Pan Head Screw - M3x4	
102	0313 0060W	Philips Pan Head Screw - M3x6	
103	0313 0160W	Philips Pan Head Screw - M3x16	
104	0314 0040W	Philips Pan Head Screw - M4x4	
105	0314 0060W	Philips Pan Head Screw - M4x6	
106	0344 0060W	Philips Truss Head Screw - M4x6	
107	0623 0100E	Spring Pin - 3x10mm	
108	0632 0120E	Spring Pin -2 x 12mm	
109	0720 0025E	Retaining Ring - M2.5	
110	0720 0030E	Retaining Ring - M3	
111	0720 0040E	Retaining Ring - M4	
112	1105 0319	Harness Clamp	

8. EXIT SECTION 2 (A378)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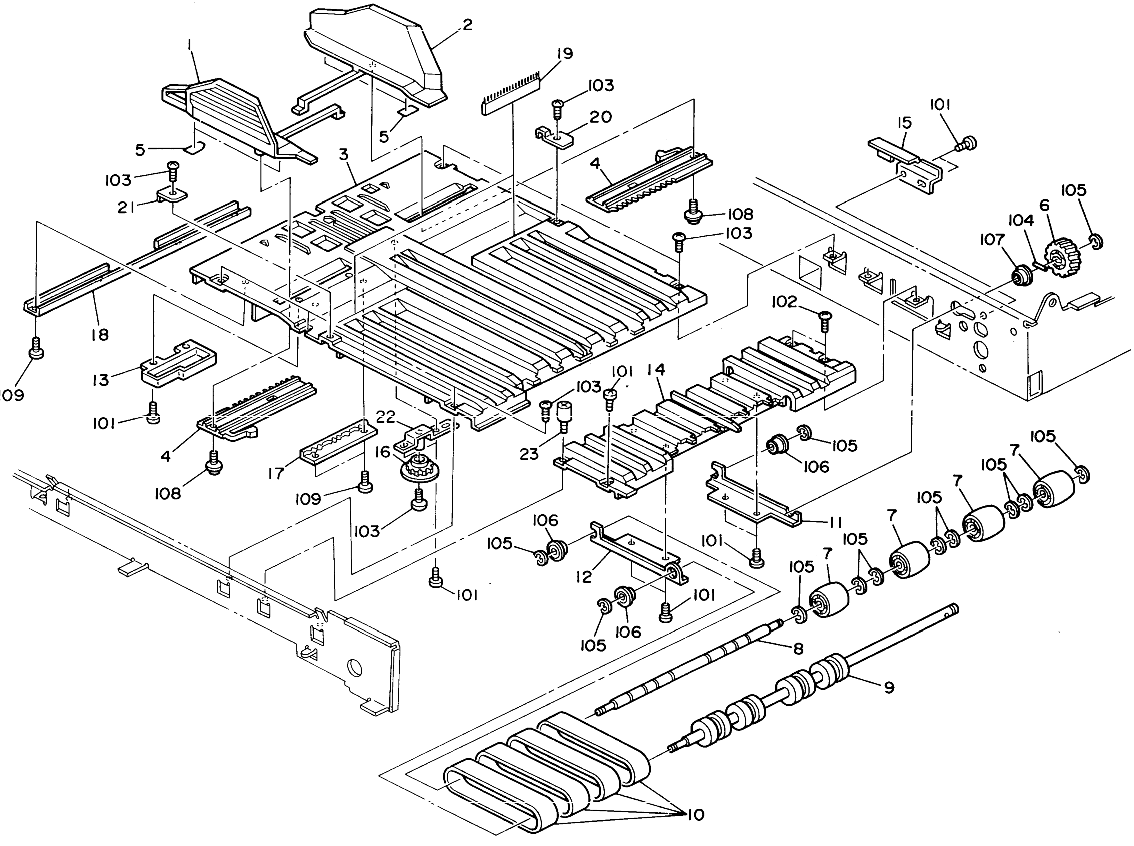
8. EXIT SECTION 2 (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 2338	Antistatic Brash Plate	1
2	A378 6050	Decal - Original Set	1
3	A499 2444	Middle Belt Roller	4
4	A378 2301	Slider Cover	1
5	A499 2317	Rear Positioning Plate	1
6	A499 2313	Front Positioning Plate	1
7	A499 2341	Exit Grouding Plate	1
8	A499 2328	Exit Guide Roller - Left	4
9	A499 2323	Exit Guide Roller - Right	4
10	A378 2377	Bushing	3
11	A378 2331	Rear Slide Plate	1
12	A378 2388	Front Spacer	2
13	A378 2351	Middle Giode Plate	1
14	A378 2378	Slide Guide Shaft	1
15	A378 2392	Rear Spacer	1
16	A499 3606	seal	1
17	A378 3571	Right Slide Cover	1
18	AA06 0259	Spring - Middle Roller	4
19	5215 3072	Side Magnet	1
20	A378 2371	Slide Lock Arm	1
21	A499 2639	Exit Sensor Seal - 20 x 13	1
22	A499 3651	Slider Grip	1
23	A378 2346	Plate	1
24	A499 2445	Holder - Middle Belt Roller	4
25	5875 2088	Shoulder Screw - M4	4

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060W	Philips Pan Head Screw - M4x6	
102	0951 4006W	Philips Screw With Flat Washer-M4x6	
103	0720 0030E	Retaining Ring - M3	
104	0720 0040E	Retaining Ring - M4	

9. ORIGINAL TABLE (A378)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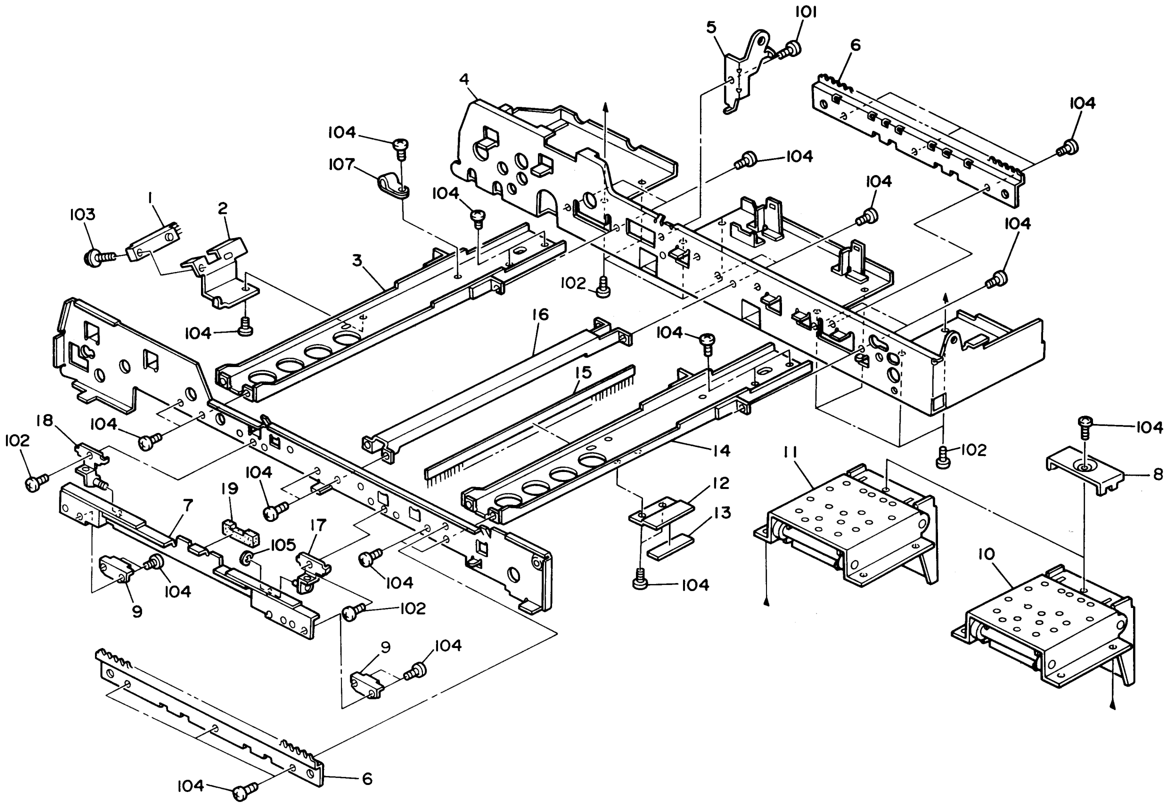
9. ORIGINAL TABLE (A378)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A499 1476	Front Side Fence	1
2	A499 1486	Rear Side Fence	1
3	A378 1406	Original Table	1
4	A499 1237	Side Fence Gear	2
5	A499 1246	Guide Seal - 1X8X16mm	4
6	AB01 1099	Gear - 20Z	1
7	A499 2427	Idle Roller	4
8	A499 2426	Idle Roller Shaft	1
9	AF02 0166	Belt Drive Roller - Right Table	1
10	A499 9501	Transport Belt-Right Table-4Pcs/Set	4
11	A499 2422	Rear Stay - Right Table	1
12	A499 2421	Front Stay - Right Table	1
13	A499 1242	Original Table Cap	1
14	A378 2416	Right Table	1
15	A378 2195	Rear Stopper	1
16	A499 1239	Gear - 20Z	1
17	A499 1268	Side Fence Guide Rail	1
18	A499 1236	Original Table Support Plate	1
19	AA12 0045	Antistatic Brush	2
20	A499 1278	Front Grounding Plate	1
21	A499 1279	Rear Grounding Plate	1
22	A499 1247	Side Fence Guide Bracket	1
23	A378 3611	Stopper Screw	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060W	Philips Pan Head Screw - M4x6	
102	0344 0060F	Philips Truss Head Screw - M4x6	
103	0344 0060W	Philips Truss Head Screw - M4x6	
104	0632 0120E	Spring Pin -2 x 12mm	
105	0720 0040E	Retaining Ring - M4	
106	0741 3505	Ball Bearing - 5x10X4	
107	0741 3506	Ball Bearing - 6x12x4 mm	
108	0951 3006W	Philips Screw With Flat Washer-M3x6	
109	0951 4006W	Philips Screw With Flat Washer-M4x6	

10. FRAME SECTION (A378)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10. FRAME SECTION (A378)

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2	A499 1277	Original Set Sensor Bracket	1
3	A499 3135	Right Stay	2
4	A378 3121	Rear Side Plate	1
5	A378 2387	Left Hinge	1
6	A499 2194	Slider Rack	2
7	A499 3635	Magnet Catch Stay	1
8	A499 4125	Hinge Stopper	2
9	5936 2480	Magnet Catch Ass'y	2
10	A499 3186	Right Hinge	1
11	A499 3171	Left Hinge	1
12	A499 1771	Stopper Plate	1
13	A499 1772	Cushion - 44x10X3	1
14	A499 3135	Right Stay	2
15	AA12 0032	Antistatic Brush	5
16	A499 1245	Table Support Bracket	1
17	A499 3616	Right Magnet Catch Hinge	1
18	A499 3611	Left Magnet Catch Hinge	1
19	A499 3631	Cushion - Magnet Catch	1

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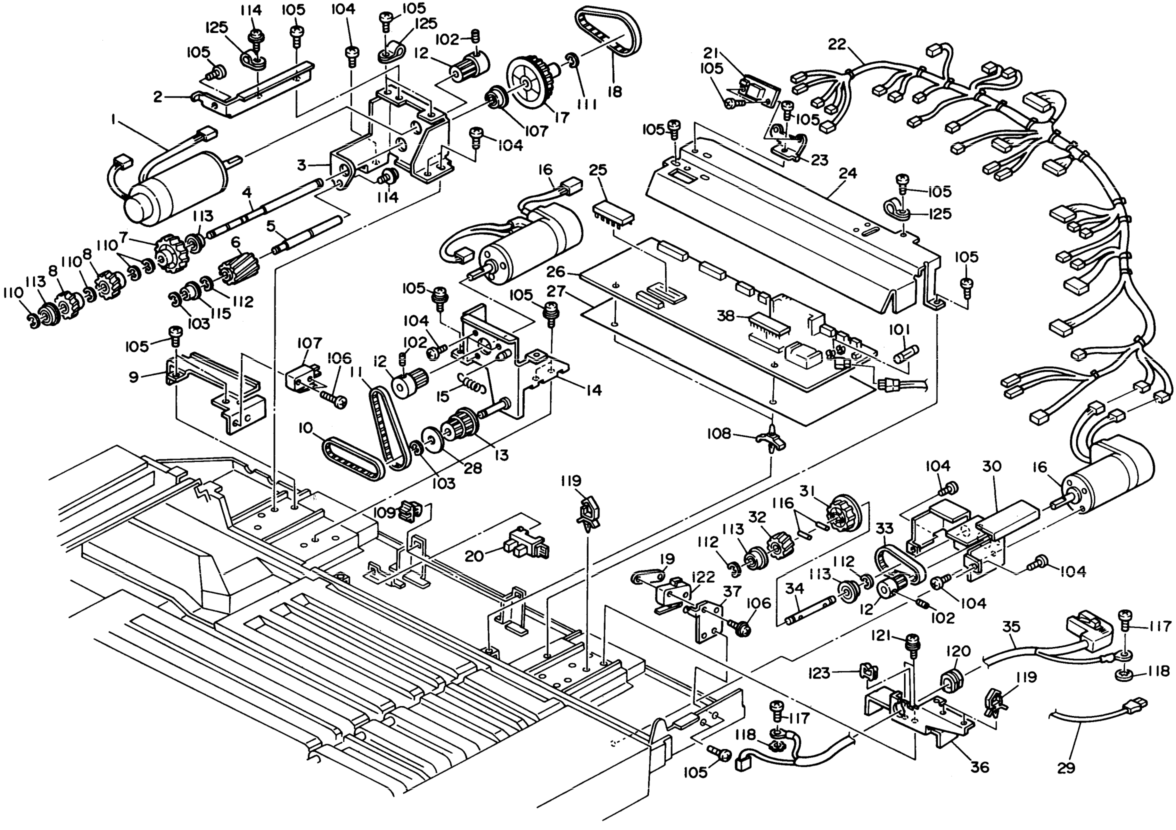
102	0313 0060W	Philips Pan Head Screw - M3x6	
103	0313 0160B	Philips Pan Head Screw - M3x16	
104	0314 0060W	Philips Pan Head Screw - M4x6	
105	0720 0025E	Retaining Ring - M2.5	
106	0720 0030E	Retaining Ring - M3	
107	1105 0062	Nylon Clip - 6N	

11. ELECTRICAL SECTION (A378)



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11. ELECTRICAL SECTION (A378)

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2	A499 1451	Motor Support Bracket	1
3	A378 1422	Feed Motor Bracket	1
4	A499 1433	Shaft - Roller Clutch -220	1
5	A499 1434	Idle Gear Shaft	1
6	A378 1089	Gear - 15Z	1
7	A378 1092	Gear - 30Z	1
8	A378 1093	Gear - 18Z	2
9	A499 3152	Switch Bracket	1
10	A378 1836	Timing Belt - 234XL	1
11	A378 1837	Timing Belt - 144XL	1
12	A378 1095	Pulley - 18Z	3
13	A378 1831	Pulley - 30Z/16Z	1
14	A378 1821	Transport Motor Bracket	1
15	A378 1839	Spring	1
16	AX06 0039	DC Motor- DC24V 19W	2
17	A378 1087	Pulley - 62Z	1
18	A378 1086	Timing Belt 160XL	1
19	5056 0509	Nut Plate - Microswitch	2
20	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
21	A499 5551	Indication Board	1
22	A378 5700	Main Harness	1
23	A378 3165	Indicator Bracket	1
24	A499 3156	Main Board Cover	1
25	A378 5810	IC - AM27C256-150DC	1
26	A378 5500	Main Control Board	1
27	A499 3167	Board Protect Sheet	1
28	A378 1833	Flange - 5Z	1
29	AW03 0032	Optical Fiber	1
30	A378 1851	Inverter Motor Bracket	1
31	A378 1856	Pulley - 45Z	1
32	A378 1857	Gear - 24Z	1
33	A378 1859	Timing Belt - 130XL	1
34	A378 1858	Reverse Roller Drive Shaft	1
35	A376 5755	Interface Harness	1

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37	A378 3145	Safety Switch Bracket	1
38	A422 5350	IC - HCTL-3	1
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102	0574 0040E	Hexagon Headless Set Screw - M4x4	
103	0720 0030E	Retaining Ring - M3	
104	0313 0040W	Philips Pan Head Screw - M3x4	
105	0314 0060W	Philips Pan Head Screw - M4x6	
106	0313 0160W	Philips Pan Head Screw - M3x16	
107	1204 2188	Interlock Switch	
108	1105 0326	Locking Support	
109	1105 0192	Locking Support	
110	0720 0050E	Retaining Ring - M5	
111	0720 0070E	Retaining Ring - M7	
112	0720 0040E	Retaining Ring - M4	
113	0741 3506	Ball Bearing - 6x12x4 mm	
114	0951 3006W	Philips Screw With Flat Washer-M3x6	
115	0805 3291	Ball Bearing - 8x16x5mm	
116	0632 0100E	Pin - M2x10	
117	0314 0080M	Philips Pan Head Screw - M4x8	
118	0704 0040C	Toothead Washer- M4	
119	1105 0310	Wire Clamp	
120	1106 0289	Bushing - SR-5N-1	
121	0957 4008B	Philips Screw W/F Washer-M4x8	
122	1204 1433	MicroSwitch	
123	1105 0328	Harness Clamp - ES-0505	
124	1105 0319	Harness Clamp	
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12. DECAL AND DOCUMENT [A378)

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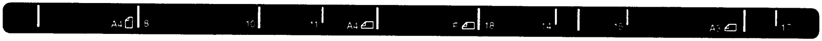
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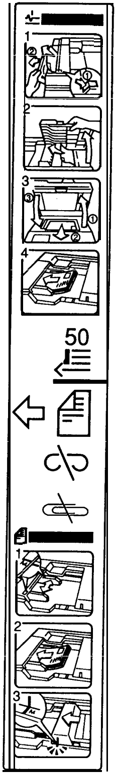

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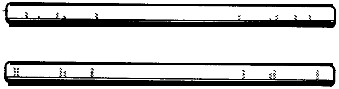

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3	A499 6013	Decal - Side Fence - A4	1

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A378 1094	Gear - 19Z/22Z	5- 7
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1204 1123	Microswitch	9-105
1204 1433	Microswitch	23-122

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1607 0076	Fuse - **3A**	**23-101**

RT31 (A380)

PARTS CATALOG

INTRODUCTION

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2. LCT Unit 2(A380) 6
3. LCT Unit 3(A380) 8
4. LCT Unit 4(A380) 10
5. LCT Unit 5(A380) 12
6. Decal and Document (A380) 14
Parts Index 17

LOCATION OF UNIT

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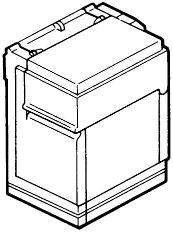

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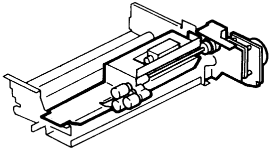
2. LCT UNIT 2 (A380)



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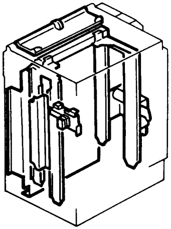
3. LCT UNIT 3 (A380)



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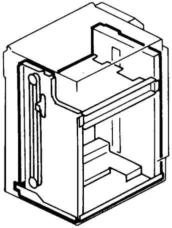
4. LCT UNIT 4 (A380)



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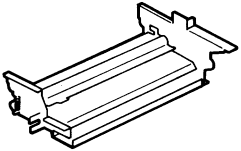
5. LCT UNIT 5 (A380)



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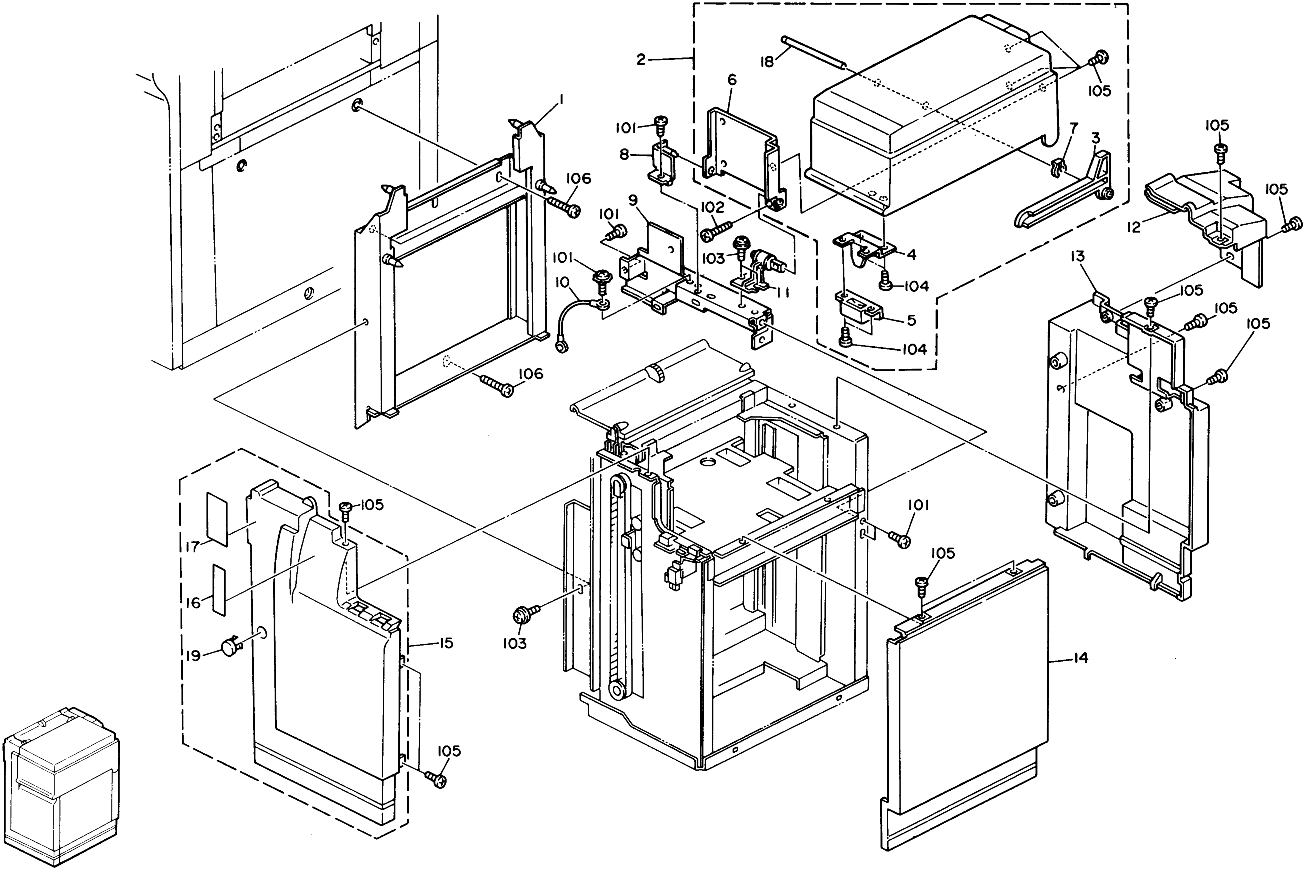
1. LCT UNIT 1 (A380)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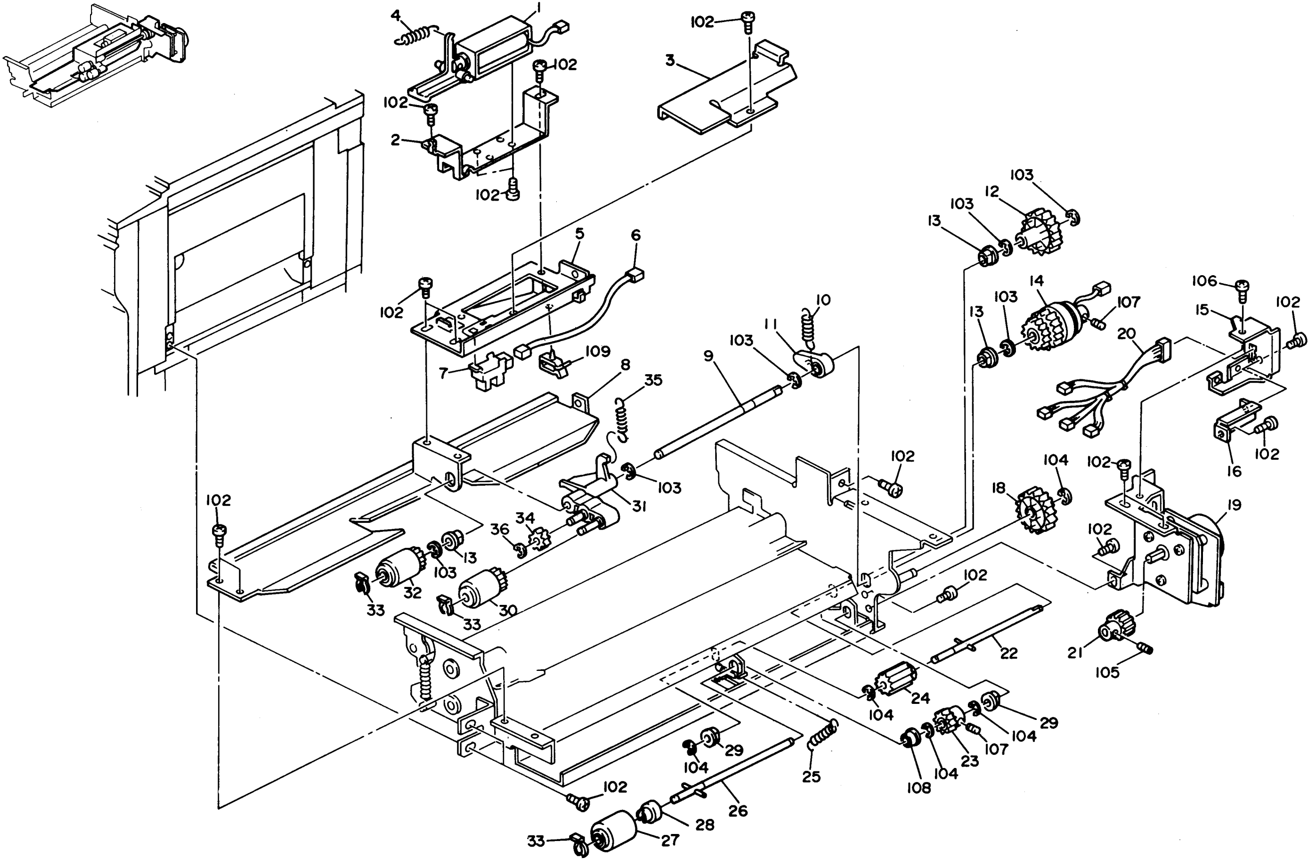
1. LCT UNIT 1 (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 1020	LCT Stay	1
2	A380 1111	Upper Cover - LT	1
2	A380 1110	Upper Cover - A4	1
3	A380 1234	End Fence	1
4	A380 1232	Door Catch	1
5	AG07 0004	Magnetic Catch	1
6	A380 1231	Hinge Stay	1
7	5447 2681	Snap Ring	1
8	A380 1272	Hinge Bracket	1
9	A380 1271	Large Hinge Bracket	1
10	A380 5607	Grounding Wire	1
11	A380 1281	Hinge Rubber Cover	1
12	A380 1171	Rear Upper Cover	1
13	A380 1161	Rear Lower Cover	1
14	A380 1251	Right Cover	1
15	A380 1130	Front Cover	1
16	A380 1131	Decal - Paper Setting	1
17	A380 1132	Decal - Misfeed Removal	1
18	A380 1233	End Fence Shaft	1
19	A024 1367	Small Cap - Left Cover	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0314 0120B	Philips Pan Head Screw - M4x12	
103	0964 4010B	Tapping Screw With Flat Washer-M4	
104	0414 0082B	Binding Self Tapping Screw - M4x8	
105	0802 5094	Tapping Truss Head Screw - M4x8	
106	0951 4016B	Philips Screw With Flat Washer - M4	

2. LCT UNIT 2 (A380)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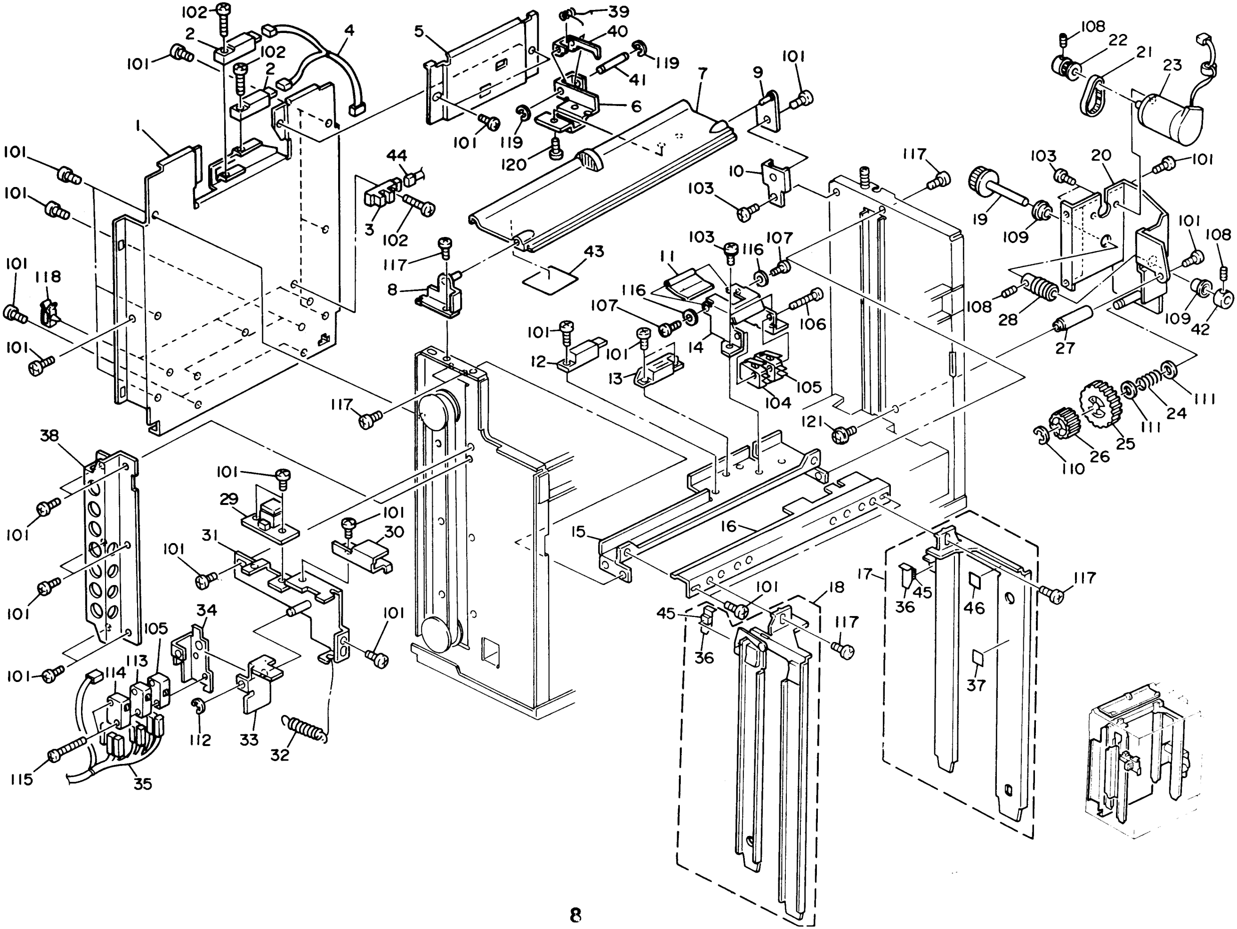
2. LCT UNIT 2 (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 2280	Pick-up Solenoid	1
2	A380 2281	Solenoid Housing	1
3	A380 2431	Solenoid Cover	1
4	A380 2494	Presure Spring	1
5	A380 2271	Upper Feed Stay	1
6	A380 5602	Sensor Harness	1
7	AW02 0021	Photointerruptor - 175487-3	1
8	A380 2351	Entrance Guide Plate	1
9	A380 2221	Feed Roller Shaft	1
10	A380 2460	Pick-up Release Spring	1
11	A096 6353	Feed Roller Lever	1
12	A380 2053	Reverse Gear - 30Z	1
13	5053 0223	Bushing - 8mm	2
14	AX21 0038	Magnetic Clutch - 5kgf	1
15	A380 2421	Harness Clamp Bracket	1
16	A380 2441	Harness Bracket Angle	1
17	A380 2431	Solenoid Cover	1
18	A380 2390	Idler Gear - 33Z	1
19	AX06 0079	Motor - 11.6/8.9W	1
20	A380 5604	Relay Harness - Paper Feed	1
21	A380 2418	Drive Gear - 22Z	1
22	A380 2251	Reverse Roller Shaft	1
23	AB01 3729	Gear - 18Z	1
24	AB01 3773	Gear - 18Z	1
25	A380 2463	Pick-up Pressure Spring	1
26	A380 2342	Reverse Roller Driven Shaft	1
27	AF03 2021	Separation Roller	1
28	A097 6000	Separation Torque Limiter	1
29	5053 0447	Bushing - 6mm	1
30	AF03 1021	Paper Feed Roller	1
31	A380 2211	Pick-up Arm	1
32	AF03 0021	Pick-up Roller	1
33	5447 2681	Snap Ring	2
34	5447 2706	Gear - 15T	1
35	A380 2463	Pick-up Pressure Spring	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	5215 2621	Snap Ring - M6	1
101	0622 0100E	Spring Pin - 2x10mm	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0720 0060B	Retaining Ring - M6	
104	0720 0040B	Retaining Ring - M4	
105	0574 0040E	Hexagon Headless Set Screw - M4x4	
106	0960 4006B	Philips Flange Screw - M4x6	

3. LCT UNIT 3 (A380)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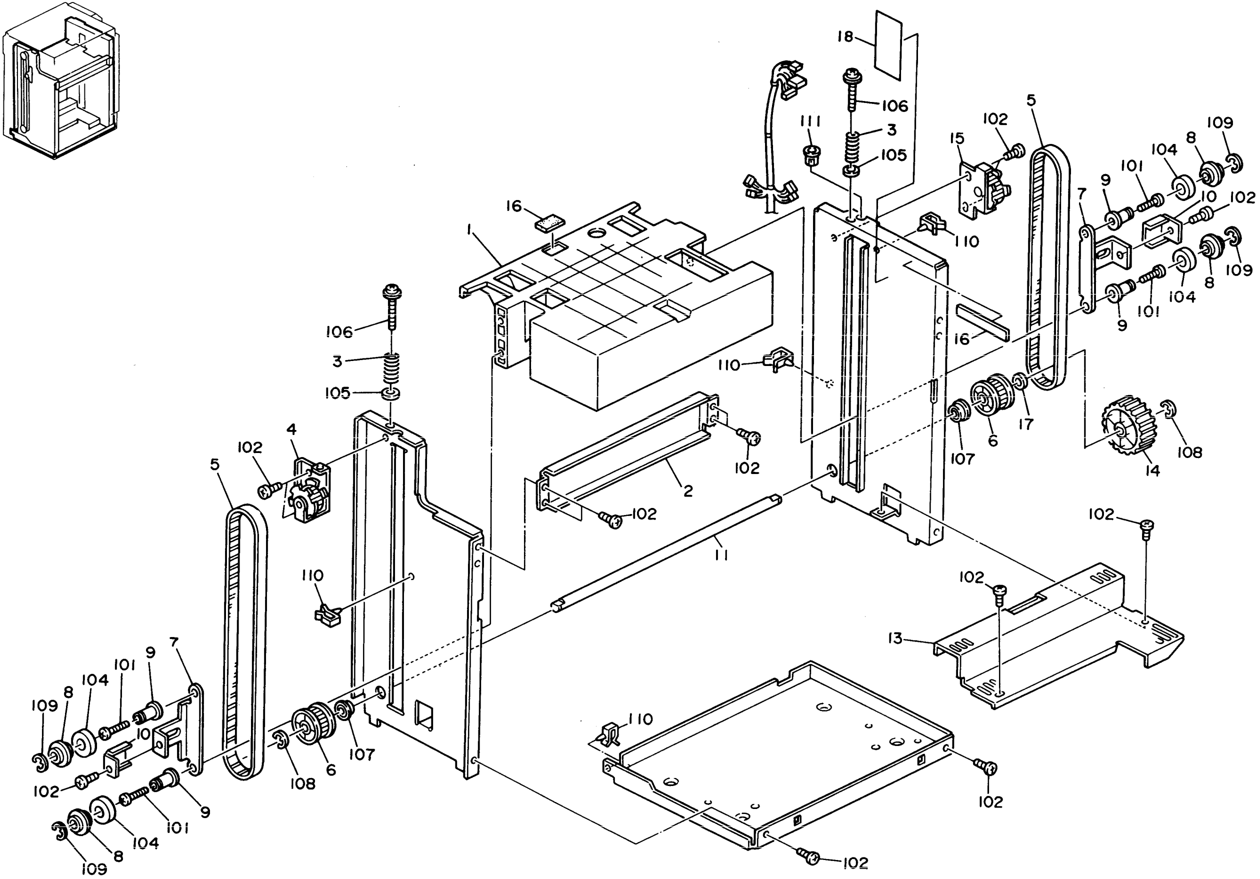
3. LCT UNIT 3 (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 1352	Left Bracket	1
2	AW01 0027	Photosensor - ON2530 CT	2
3	AW02 0012	Photosensor Ass'y	1
4	A380 5603	Relay Harness - Paper Set	1
5	A380 1354	Registration Roller Cover	1
6	A380 1298	Paper Sensor Holder	1
7	A380 1081	Misfeed Cover	1
8	A380 1211	Front Hinge	1
9	A380 1215	Rear Hinge	1
10	A380 1213	Rear Bracket - Misfeed	1
11	A380 1358	Micro Switch Plate	1
12	AW01 0064	Optical Sensor Ass'y	1
13	AG07 0004	Magnetic Catch	1
14	A380 1357	Safety Switch Cover	1
15	A380 1355	Upper Stay	1
16	A380 1941	Side Fence Adjuster - Upper	1
17	A380 1852	Rear Side Fence	1
18	A380 1851	Front Side Fence	1
19	A380 1433	Timing Pulley - S2M T70	1
20	A380 1410	Drive Bracket	1
21	A380 1434	Timing Pulley - S2M T76	1
22	AB03 0216	Pulley - 15Z	1
23	AX06 0078	Drive Motor - 13W	1
24	A380 1436	Pressure Spring	1
25	AB01 3809	Worm Wheel - 44Z	1
26	A380 1432	Gear - 24Z	1
27	A380 1373	Stud - M4	1
28	AB01 3709	Worm Gear	1
29	A355 5320	Push Switch	1
30	A380 1267	Magnetic Holder	1
31	A380 1263	Door Switch Bracket	1
32	A380 2490	Reverse Roller Pressure Spring	1
33	A380 1262	Door Switch Holder	1
34	A380 1261	Operation Key	1
35	A380 5601	Main Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	A079 2685	Seide Fence Plate	2
37	AA00 2010	Decal - Paper Level	1
38	A380 1381	Front Support Plate	1
39	A380 1297	Pressure Spring	1
40	A380 1393	Actuator	1
41	A380 1292	Actuator Shaft	1
42	A006 2982	Spacer - M6x9	1
43	A380 1132	Decal - Misfeed Removal	1
44	A380 5605	Relay Harness - Paper Tray	1
45	A355 3349	Side Fence Pad	2
46	A380 1935	Rear Guide Sheet	1
101	0434 0080B	Philips Tapping Screw - M4x8	
102	0313 0100B	Philips Pan Head Screw - M3x10	
103	0313 0060B	Philips Pan Head Screw - M3x6	
104	1204 0704	Micro Switch - D2RV-G	
105	1204 2136	Micro Switch	
106	0313 0250B	Philips Pan Head Screw - M3x25	
107	0353 0060B	Philips Pan Head Screw - M3x6	
108	0574 0040E	Hexagon Headless Set Screw - M4x4	
109	0741 3506	Ball Bearing - 6x12x4 mm	
110	0720 0060B	Retaining Ring - M6	
111	0807 5056	Washer - 8.1mm	
112	0720 0040B	Retaining Ring - M4	
113	1204 1148	Microswitch	
114	1204 0192	Microswitch - UL	
115	0313 0350B	Philips Pan Head Screw - M3x35	
116	0807 0030B	Washer - M3	
117	0344 0050F	Philips Trus Screw - M4x5	
118	1105 0200	Clamp	
119	0720 0020E	Retaining Ring - M2	
120	0414 0082B	Binding Self Tapping Screw - M4x8	

4. LCT UNIT 4 (A380)



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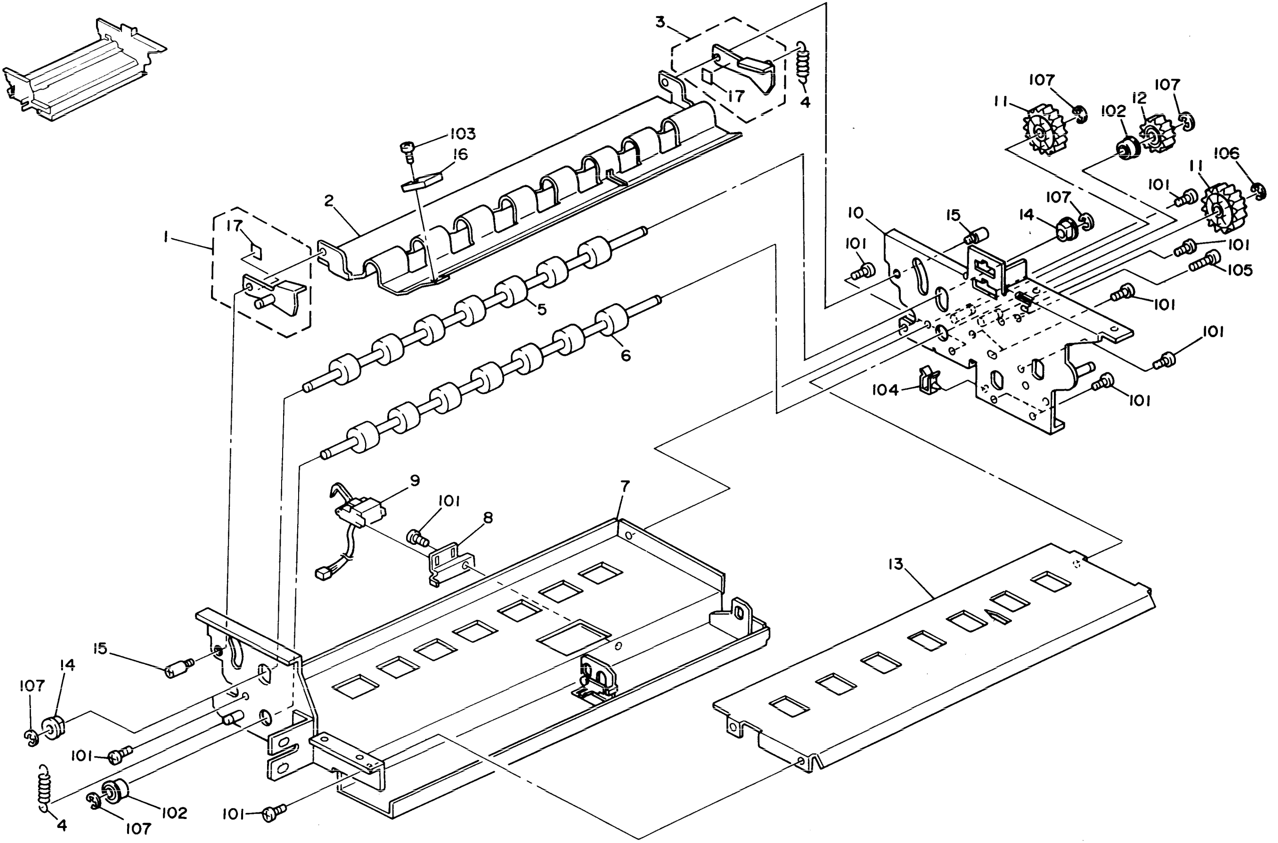
4. LCT UNIT 4 (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 1781	LCT Tray	1
2	A380 1356	Right Stay	1
3	AA06 3038	Pressure Spring	2
4	A380 1820	Front Idler Bracket	1
5	A380 1801	Timing Belt - S5M T210	2
6	A380 1803	Timing Pulley - S5M 22Z	2
7	A380 1753	Timing Belt Bracket	2
8	A380 1754	Guide Roller	4
9	A380 1752	Roller Shaft	4
10	A380 1810	Timing Belt Clamp	2
11	A380 1805	Tray Lift Shaft	1
13	A380 1942	Side Fence Adjuster - Lower	1
14	A380 1800	Drive Gear - 42Z	1
15	A380 1825	Rear Idler Bracket	1
16	A421 2543	Friction Pad	1
17	A042 2568	Spacer - 8.1x10X3.7	1
18	A380 1376	Decal - Caution - CAN	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0200B	Philips Pan Head Screw - M4x20	
102	0434 0080B	Philips Tapping Screw - M4x8	
103	0951 3006B	Philips Screw With Flat Washer-M3x6	
104	0805 3270	Ball Bearing - 8x16x5mm	

5. LCT UNIT 5 (A380)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5. LCT UNIT 5 (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 2319	Front Paper Holder Arm	1
2	A380 2311	Guide Plate	1
3	A380 2324	Rear Paper Holder Arm	1
4	A380 2491	Pressure Spring	2
5	A380 2382	Driven Roller	1
6	A380 2381	Drive Roller	1
7	A380 2111	Paper Feed Unit Base	1
8	A380 2331	Sensor Bracket	1
9	AW02 0038	Photosensor Ass'y	1
10	A380 2151	Rear Side Plate	1
11	AB01 3167	Gear - 32T	2
12	A380 2458	Drive Gear - 22Z	1
13	A308 2360	Lower Guide Plate	1
14	5053 0223	Bushing - 8mm	2
15	5409 1855	Mounting Pin	2
16	A353 2243	Lever Knob	1
17	A380 2323	Arm Seal - 12x12	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	

6. DECAL AND DOCUMENT (A380)

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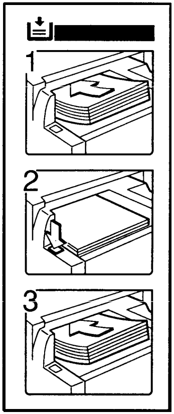

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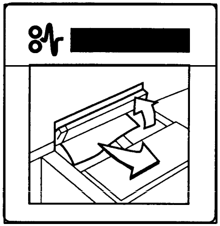

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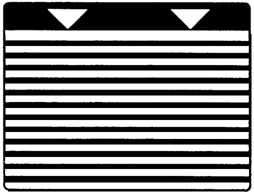

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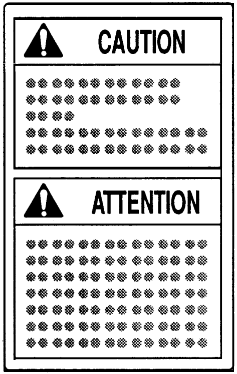
CAUTION
ATTENTION

6. DECAL AND DOCUMENT (A380)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A380 1131	Decal - Paper Setting	1
2	A380 1132	Decal - Misfeed Removal	1
3	AA00 2010	Decal - Paper Level	1
4	A380 1376	Decal - Caution - CAN	1

Index No.	Part No.	Description	Q'ty Per Assembly

PARTS INDEX

Part No.	Description	Page and Index No.
A380 1020	LCT Stay	5- 1
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SR400 (A379)

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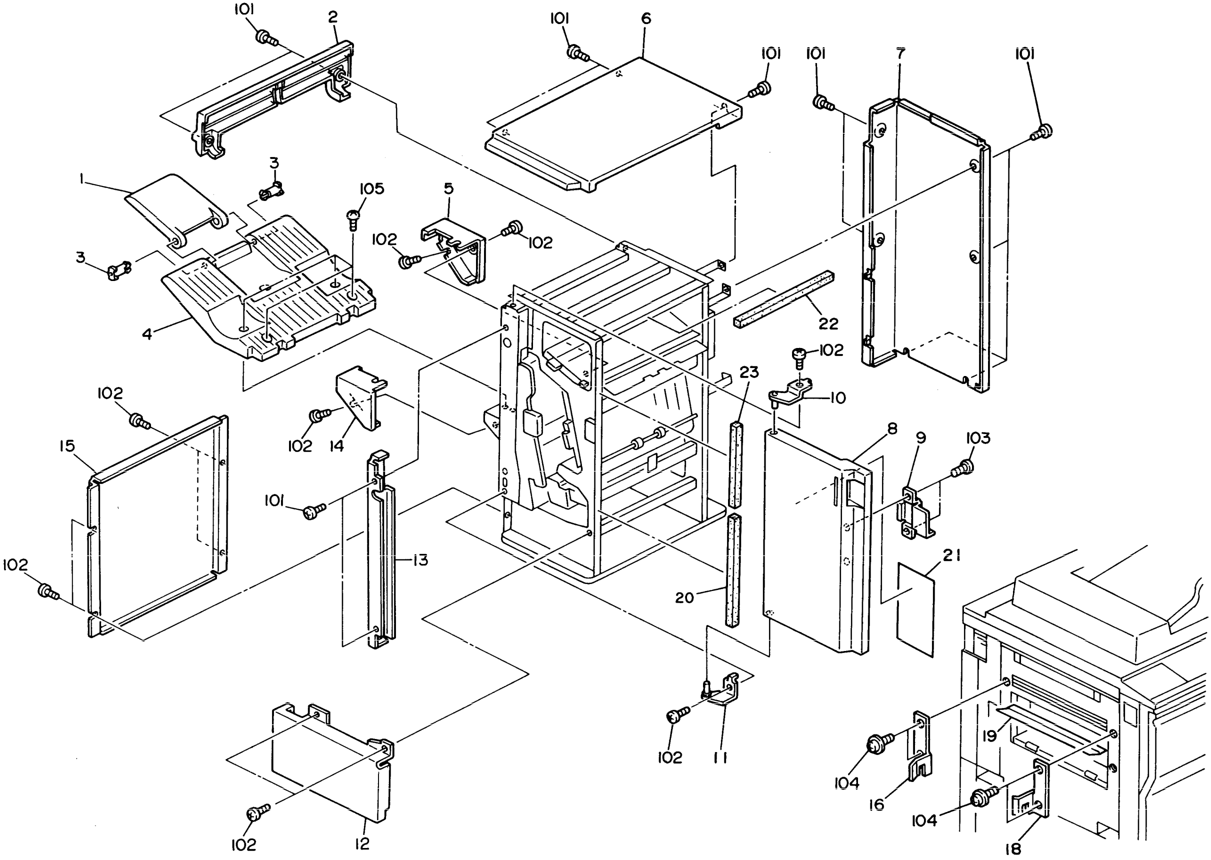
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1. EXTERIOR (A379)

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2	A379 6251	Upper Left Cover	1
3	A379 3491	Shift Tray Shaft	2
4	A379 3411	Large Shift Tray	1
5	A379 3551	Rear Tray Cover	1
6	A379 6211	Top Cover	1
7	A379 6311	Rear Cover	1
8	A379 6111	Front Door	1
9	A353 4311	Safety Switch Actuator	1
10	A379 6121	Upper Hinge	1
11	A379 6131	Lower Hinge	1
12	A379 6171	Lower Front Cover	1
13	A379 6151	Upper Inner Cover	1
14	A379 3511	Front Tray Cover	1
15	A379 6411	Lower Left Cover	1
16	A377 1187	Rear Joint Bracket	1
18	A377 1186	‘rent Joint Bracket	1
19	A379 2329	Entrance Guide	1
20	A379 4921	Lower Cusion - 5x10x637	1
21	A379 4711	Decal - Misfeed Removal	1
22	5316 3062	Cusion - Cutter	1
23	A379 4922	Upper Cusion - 5x10x125	1

Index No.	Part No.	Description	Q'ty Per Assembly
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102	0314 0060B	Philips Pan Head Screw - M4x6	
103	0414 0082B	Binding Self Tapping Screw - M4x8	
104	0314 0120B	Philips Pan Head Screw - M4x12	
105	0344 0080F	Philips Truss Head Screw- M4x8	

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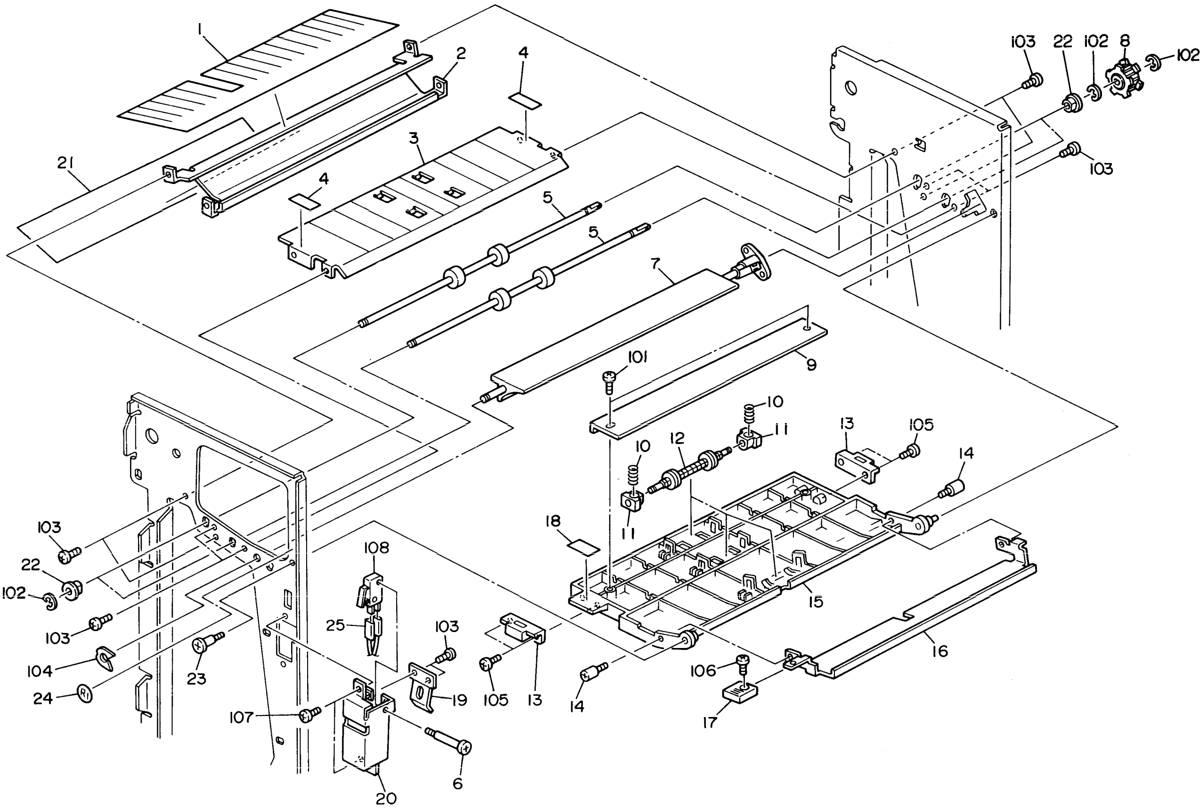
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2. TRANSPORT SECTION 1 (A379)

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1	A379 2523	Exit Guide Mylar	1
2	A379 2521	Exit Guide Plate	1
3	A379 2311	Upper Guide Plate	1
4	A379 2318	Upper Magnet Sheet	2
5	AF02 0305	Transport Roller	5
6	A300 3155	Stepped Screw-M25x32	1
7	A379 2711	Junction Gate	1
8	AB03 0374	Timing Pulley-20Z	2
9	A379 2323	Upper Support Plate	1
10	A458 2479	Lock Pin Spring	12
11	AA08 0034	Bushing - 4x5x7	12
12	AF02 2075	Driven Roller	6
13	AG07 0004	Magnetic Catch	5
14	5409 1855	Mounting Pin	11
15	A379 2322	Entrance Guide	1
16	A379 2326	Supporting Entrance Guide	1
17	A353 2243	Lever Knob	1
18	A353 2265	Decal - R1	1
19	A379 5915	Spring Plate	1
20	A300 3153	Safety Switch Bracket	1
21	A379 2525	Exit Guide Mylar-2	1
22	5053 0447	Bushing - 6mm	2
23	AA14 3215	Screw - M5x6	1
24	A379 4751	Decal - R1	1
25	A379 5712	Safety Switch Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
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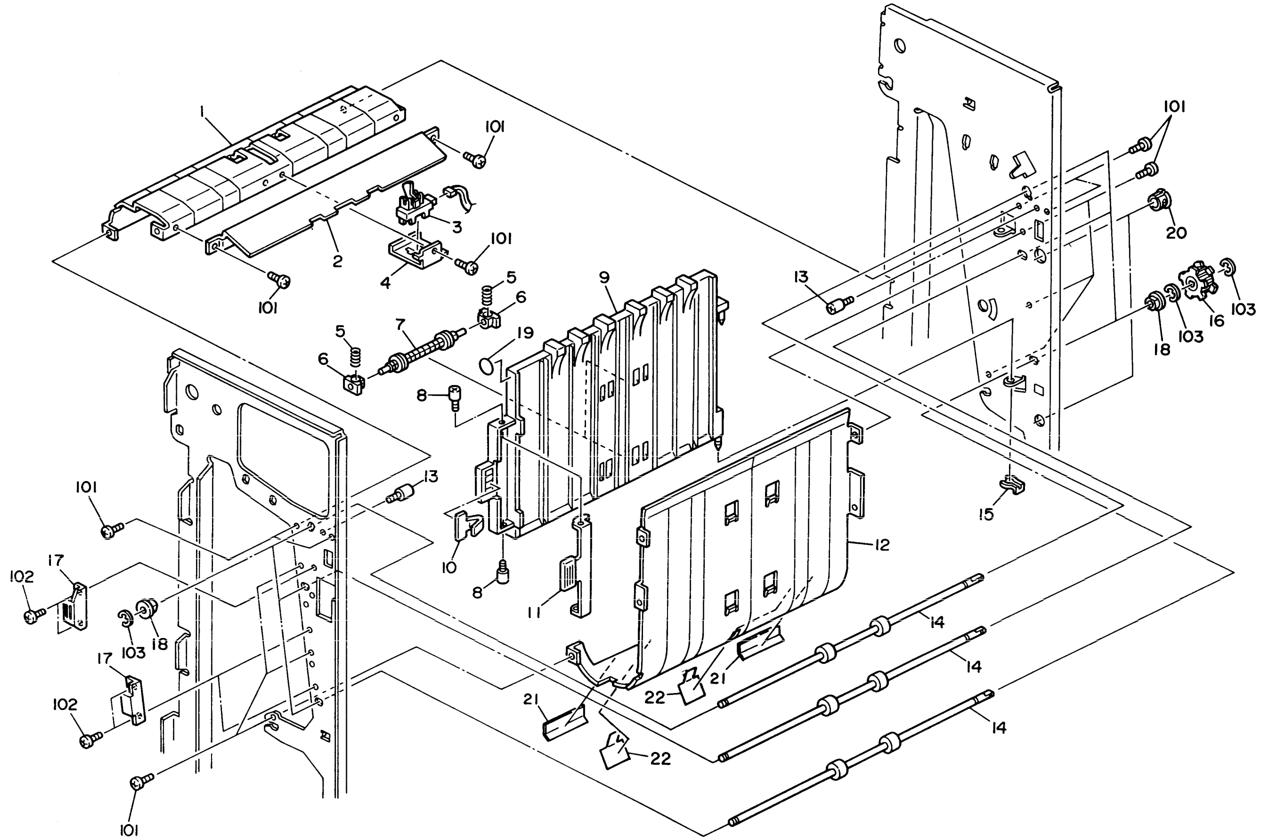
102	0720 0040B	Retaining Ring - M4	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	0805 0088	Retaining Ring - M6	
105	0802 5210	Tapping Screw - M3x8	
106	0353 0060F	Philips Truss Head Screw - M3x6	
107	0353 0040B	Screw - M3x4	
108	1204 2188	Interlock Switch	

3. TRANSPORT SECTION 2 (A379)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3. TRANSPORT SECTION 2 (A379)

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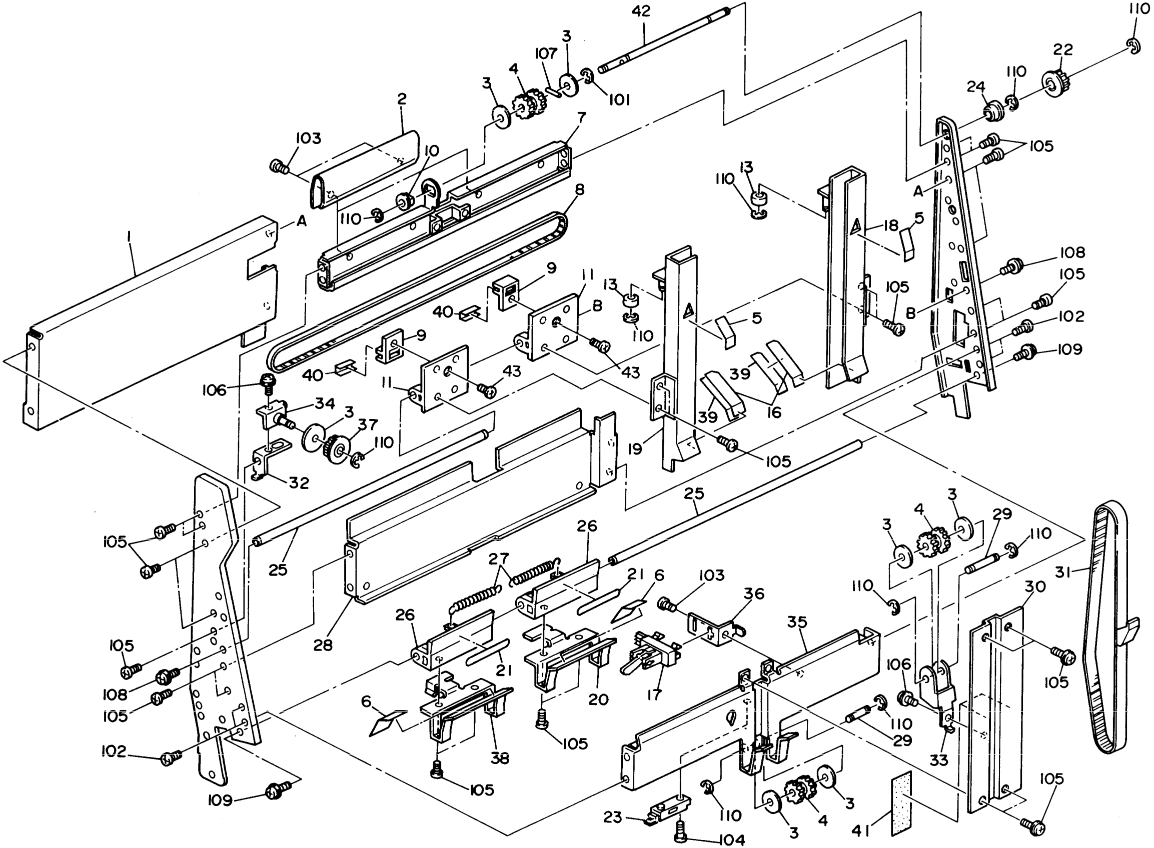
2	A377 2121	Relay Guide	1
3	AW02 0049	Photointerruptor - OS - 580213-703	3
4	A379 2416	Entrance Sensor Bracket	1
5	A458 2479	Lock Pin Spring	12
6	AA08 0034	Bushing - 4x5x7	12
7	AF02 2075	Driven Roller	6
8	5409 1855	Mounting Pin	11
9	A379 2431	Transport Guide	1
10	A300 3244	Spring Plate	1
11	A300 3233	Transport Guide Knob	1
12	A379 2421	Vertical Transport Guide	1
13	AA14 3059	Pin - 6x16	4
14	AF02 0305	Transport Roller	5
15	5447 2681	Snap Ring	2
16	AB03 0374	Timing Pulley - 20Z	2
17	AG07 0004	Magnetic Catch	5
18	5053 0447	Bushing - 6mm	13
19	A379 4752	Decal - R2	1
20	A351 3143	Bushing - EO-12N 22mm	2
21	A379 2425	Exit Lower Guide	2
22	A379 2426	2nd Exit Lower Guide	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0353 0060B	Philips Pan Head Screw - M3x6	
103	0720 0040B	Retaining Ring - M4	

4. STAPLER UNIT 1 (A379)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4. STAPLER UNIT 1 (A379)

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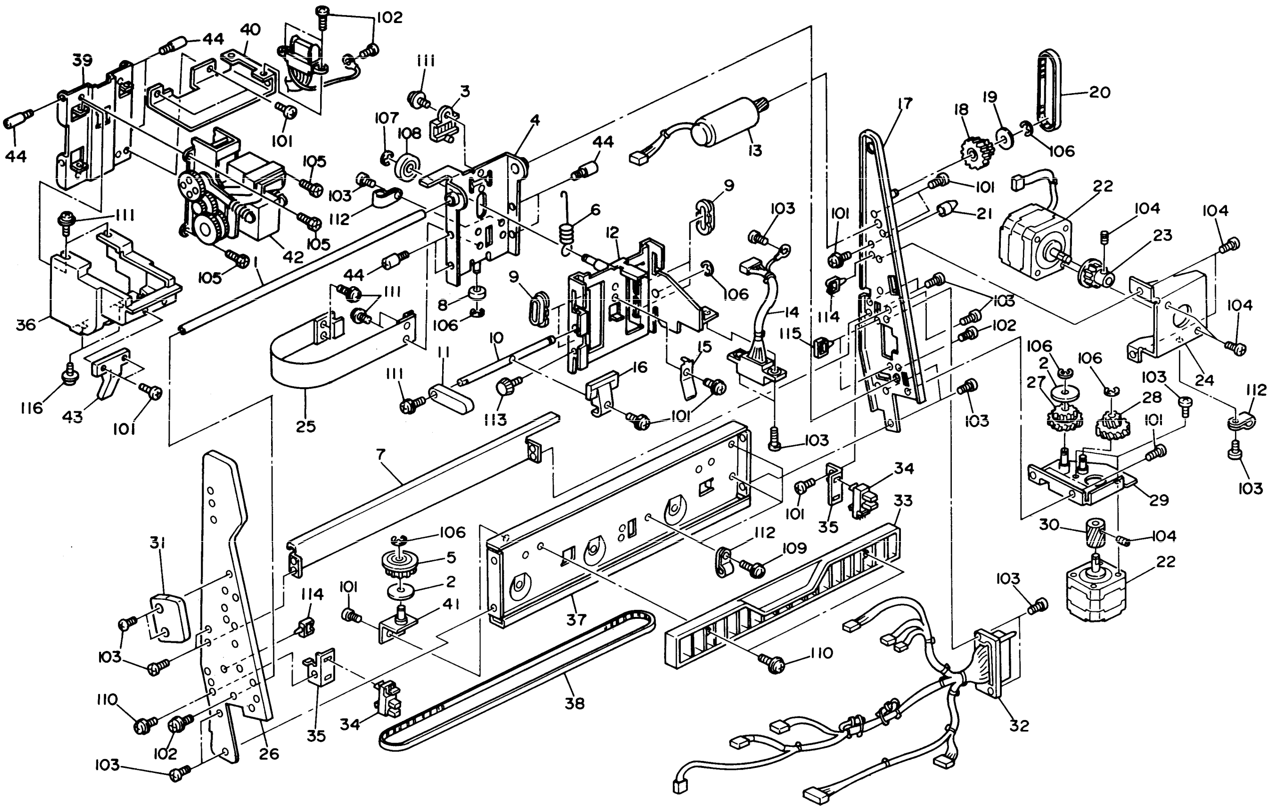
1	A300 3544	Upper Cover	1
2	A300 3543	Exit Cover	2
3	A300 3812	Spacer - 6x22x1.5	9
4	AB03 0229	Timing Pulley - 20Z	3
5	A379 4127	Middle Guide Seal	2
6	A379 4259	Positioning Fence Mylar	2
7	A300 3533	Upper Stay	1
8	AA04 3100	Timing Belt-900P2M4	2
9	A300 3635	Belt Clamp	2
10	5053 0447	Bushing - 6mm	13
11	A379 4131	Jogger Fence Slider	2
12	A028 7535	Antistatic Brush	3
13	5201 2722	Bushud Roller	2
16	A300 3626	Lower Guide Seal	2
17	AW02 0013	Inlet Sensor	1
18	A300 3621	Rear Jogger Fence	1
19	A300 3611	Front Jogger Fence	1
20	A379 4256	Rear Stapler Positioning Fence	1
21	A300 3757	Pad - 56x2.5x1	2
22	AB03 0030	Pulley - 17Z	1
23	AW01 0025	Photosensor - No2530	1
24	A422 1078	Bushing - 6x12x4mm	1
25	A300 3661	Slider Guide Rod	2
26	A379 4251	Slide Holder	2
27	A300 3759	Spring	2
28	A300 3545	Lower Cover	1
29	A300 3813	shaft - 6X21.5	2
30	A379 4331	Paper Feed Guide Plate	1
31	A300 3816	Timing Belt -900 S2M14	1
32	A300 3641	Fixing Plate	1
33	A300 3815	Spring Plate	1
34	A300 3646	Jogger Idler Bracket	2
35	A379 4261	Positioning Guide Plate	1
36	A300 3841	Position Sensor Bracket	1
37	AB03 0227	Pulley - 32Z	2

Index No.	Part No.	Description	Q'ty Per Assembly
38	A379 4255	Front Stapler Positioning Fence	1
39	A300 3618	Antistatic Guide Seal	2
40	A300 3634	Spring Plate - Timing Belt	2
41	A379 4335	Cushion - 2x35x165	2
42	A379 4401	Upper Exit Shaft	1
43	5875 2088	Shoulder Screw - M4	2
102	0313 0060W	Philips Pan Head Screw - M3x6	
103	0313 0100W	Philips Pan Head Screw - M3x10	
104	0313 0140B	Philips Pan Head Screw - M3x14	
105	0314 0060W	Philips Pan Head Screw - M4x6	
106	0344 0060F	Philips Truss Head Screw - M4x6	
107	0623 0120E	Spring Pin - M3x12	
108	0951 4006W	Philips Screw With Flat Washer-M4x6	
109	0951 4008W	Philips Screw With Flat Washer-M4x8	
110	0720 0040E	Retaining Ring - M4	
111	0741 3506	Ball Bearing - 6x12x4 mm	

5. STAPLER UNIT 2 (A379)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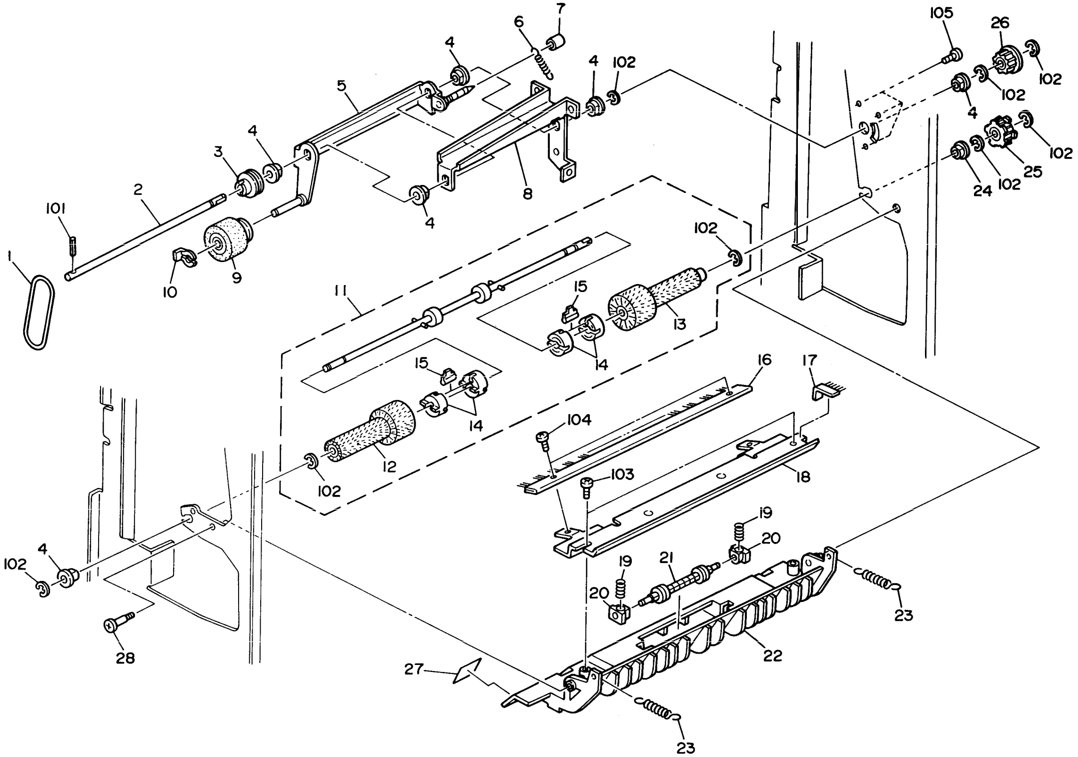
5. STAPLER UNIT 2 (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A300 3733	Stapler Guide Rod	1
2	A300 3812	Spacer - 6x22x1.5	2
3	A300 3717	Slide Belt Holder - Stapler	1
4	A379 4211	Stapler Slide Holder	1
5	AB03 0227	Pulley - 32Z	2
6	A300 3736	Lift Up Spring	1
7	A300 3537	Slide Rail - Center	1
8	A300 2132	Guide Roller	1
9	A300 3731	Slide Supporter	4
10	A300 3746	Stapler Lock Shaft	1
11	A300 3747	Pick - Off Lever	1
12	A300 3721	Staplr Holder	1
13	A409 1234	Exit Motor - DC 9W	1
14	A300 5541	Stapler Harness -2	1
15	A300 3743	Spring Plate	1
16	A300 3741	Stapler Lock Arm	1
17	A300 3521	Rear Frame	1
18	AB01 0055	Gear - 46Z/13Z	1
19	A300 3822	Spacer - 11x15x1	1
20	AA04 3104	Timing Belt -219 P3M4	1
21	A300 3539	Mounting Shaft	1
22	AX06 0089	Steping Motor - DC4.5W	2
23	AB03 0382	Timing Puiiey - 24Z	1
24	A379 4155	Jogger Motor Bracket	1
25	A499 5501	Stapler Harness -1	1
26	A300 3511	Front Frame	1
27	AB03 3028	Pulley - 32Z/31Z	1
28	AB01 1085	Gear -14Z/31Z	1
29	A379 4271	Slide Motor Bracket	1
30	AB01 1141	Gear - 14Z	1
31	A300 3551	Grip Stapler Unit	1
32	A300 5521	Stapler Tray Harness	1
33	A300 3732	Stapler Guide Rail	1
34	AW02 0006	Photointerruptor - EE-SX460-P2	4
35	A300 3638	Jogger Sensor Bracket	2
36	A379 4225	Stapler Cover	1
37	A300 3531	Lower Left Plate	1
38	AA04 3100	Timing Belt -900 P2M4	2
39	A379 4221	Stapler Stand	1
40	A379 4222	Stapler Connector Bracket	1
41	A300 3646	Jogger Idler Bracket	2
42	AJ01 1007	Stapler - EH-5RR4	1
43	A379 4226	Guide Sheet	1
44	5409 1855	Mounting Pin	11
101	0313 0060W	Philips Pan Head Screw - M3x6	
102	0313 0080W	Philips Pan Head Screw - M3x8	
103	0314 0060W	Philips Pan Head Screw - M4x6	
104	0574 0040E	Hexagon Headless Set Screw - M4x4	
105	0584 0061W	Hexagon Bolt - M4x6	
106	0720 0040E	Retaining Ring - M4	
107	0720 0060E	Retaining Ring - M6	
108	0740 3008	Ball Bearing - 8x22x7	
109	0951 4006W	Philips Screw With Flat Washer-M4x6	
110	0951 4008W	Philips Screw With Flat Washer-M4x8	
111	0313 0140B	Philips Pan Head Screw - M3x14	
112	1105 0005	Nylon Clip - 3N	
113	0803 0017	Knob Screw - M4x6.5	
114	1105 0234	Clamp	
115	1105 0200	Clamp	
116	0951 3008W	Philips Screw With Flat Washer-M3x8	

6. STAPLER UNIT 3 (A379)



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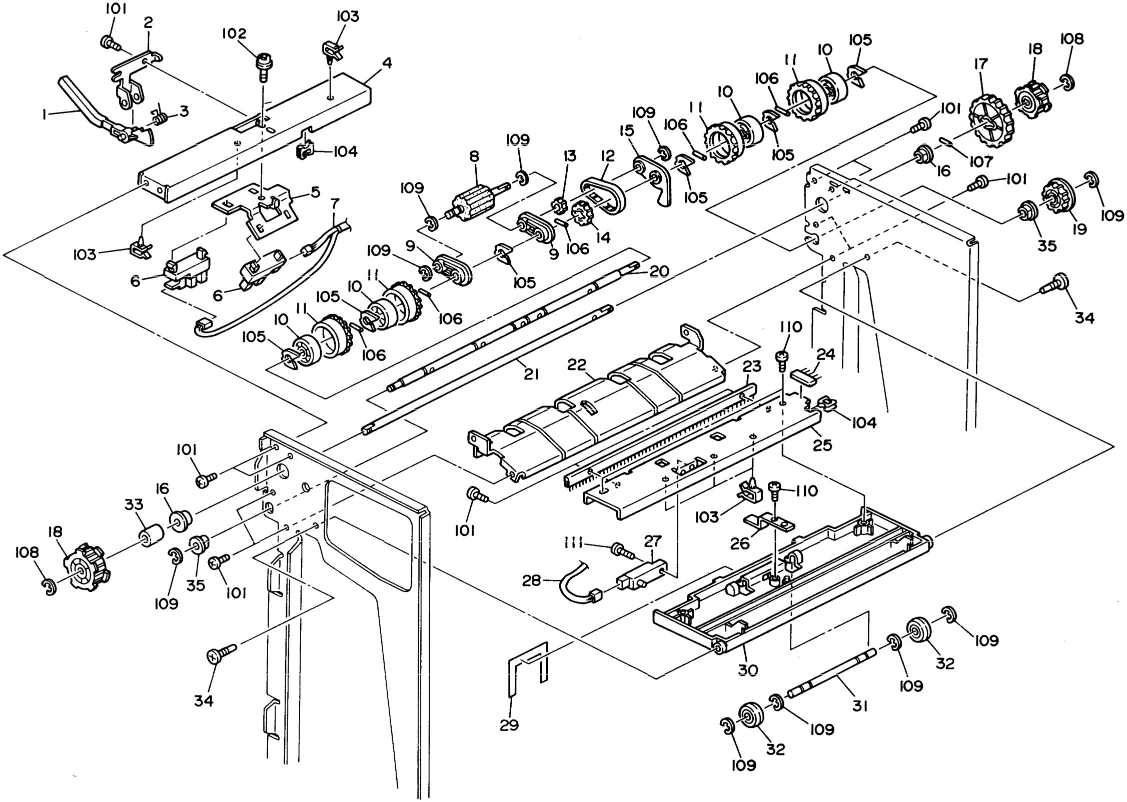
6. STAPLER UNIT 3 (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	5919 2132	Positioning Roller Belt	1
2	A300 3856	Positioning Roller Shaft	1
3	5919 2127	Positioning Roller Pulley	1
4	5053 0447	Bushing - 6mm	13
5	A379 2811	Positioning Roller Arm	1
6	AA06 0557	Positioning Roller Spring	1
7	AA16 1099	Lever Cushion	1
8	A300 3851	Positioning Roller Bracket	1
9	5206 2671	Positioning Roller	1
10	5447 2681	Snap Ring	2
11	A379 2610	Exit Transport Roller	1
12	A300 3271	Positioning Brush	1
13	A300 3272	Rear Positioning Brush	1
14	A379 2610	Paddle Roller	4
15	A379 2610	Exit Transport Roller	2
16	AA12 0027	Antistatic Brush	2
17	A028 7535	Antistatic Brush	3
18	A379 2512	Supporting Lower Guide	1
19	A458 2479	Lock Pin Spring	12
20	AA08 0034	Bushing - 4x5x7	12
21	AF02 2075	Driven Roller	6
22	A379 2511	Lower Guide Plate	1
23	5920 2144	Spring - Lock	2
24	AA08 0071	Bushing -6x10x6	6
25	AB03 0374	Timing Pulley - 20Z	1
26	AB03 0340	Brush Roller Pulley	1
27	A379 4761	Decal -R2 19x29	1
28	AA14 3215	Screw - M5x6	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0623 0120E	Spring Pin - M3x12	
102	0720 0040B	Retaining Ring - M4	
103	0414 0082B	Binding Self Tapping Screw - M4x8	
104	0314 0050B	Philips Pan Head Screw - M4x5	
105	0314 0060B	Philips Pan Head Screw - M4x6	

7. PAPER EXIT SECTION (A379)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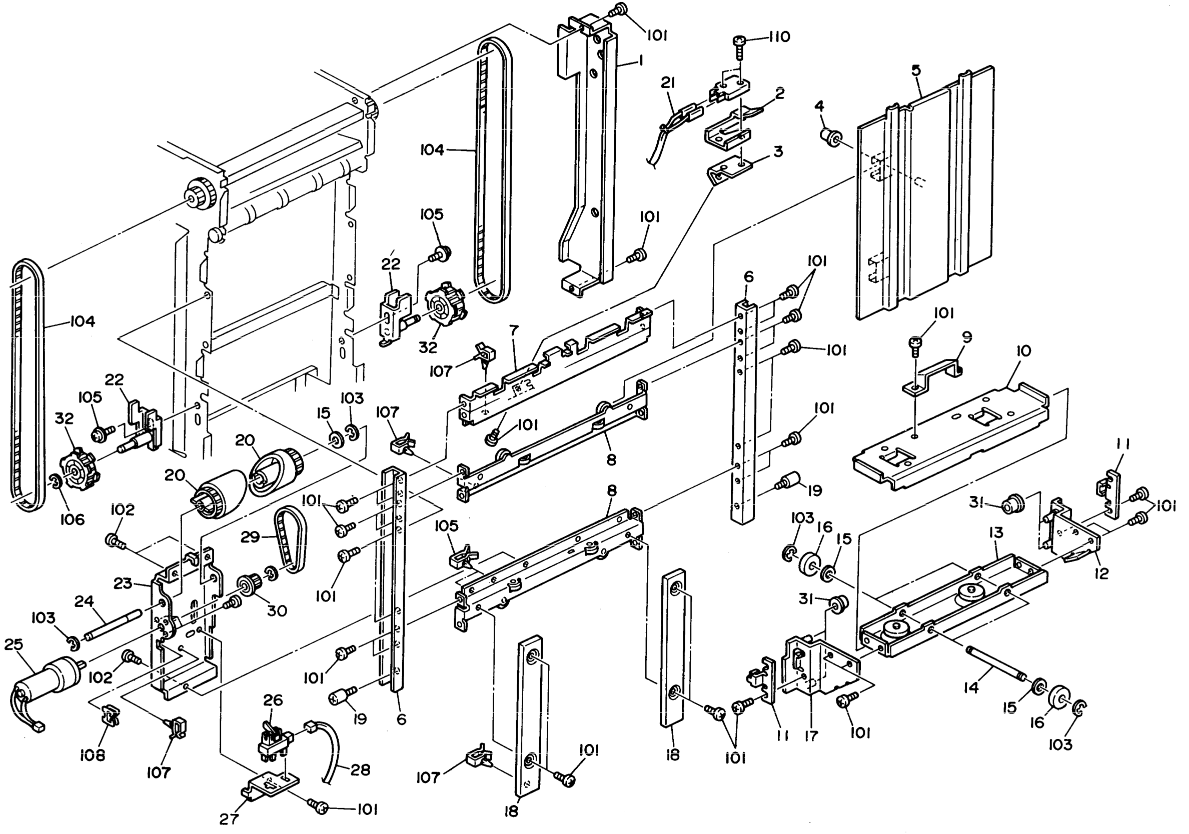
7. PAPER EXIT SECTION (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A353 3171	Upper Sensor Actuator	1
2	A353 3172	Actuator Bracket	1
3	A353 3173	Pressure Spring	1
4	A379 1211	Upper Exit Stay	1
5	A353 3181	Exit Sensor Bracket	1
6	AW02 0006	Photointerruptor - EE-SX460-P2	4
7	A379 5716	Paper Sensor Harness	1
8	A379 2115	Reverse Roller	1
9	A353 3192	Front Arm	2
10	A353 3201	Exit Roller	4
11	A379 2112	Exit Roller Ring	4
12	AA04 3181	Timing Belt - B40S2M80	1
13	AB03 0378	Timing Pulley - 20Z	1
14	AB03 0377	Timing Pulley - 28Z	1
15	A353 3197	Rear Arm	1
16	5420 4860	Bushing - 8mm	2
17	AB01 3712	Gear - 52Z	1
18	AB03 0375	Timing Pulley - 30Z	2
19	A379 1636	Pulley Flange - 8x35x1	1
20	A379 2111	Exit Rooler Shaft	1
21	A379 3731	Lift Drive Shaft	1
22	A379 2221	Lower Exit Guide	1
23	AA12 0027	Antistatic Brush	2
24	A028 7535	Antistatic Brush	3
25	A379 2213	Exit Guide Bracket	1
26	A353 3354	Driven Roller Holder	1
27	A010 5700	Sensor	1
28	A379 5719	Exit Sensor Harness	1
29	A379 2215	Exit Mylar	1
30	A379 2211	Exit Guide	1
31	A379 2212	Driven Roller Shaft	1
32	A353 3351	Exit Driven Roller	2
33	A300 2752	Spacer 8x12x12	1
34	AA14 3215	Screw - M5x6	4
35	5053 0447	Bushing - 6mm	13

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0951 4006B	Philips Screw With Washer - M4x6	
103	1105 0200	Clamp	
104	1105 0328	Harness Clamp - ES-0505	
105	0805 0088	Retaining Ring - M6	
106	0633 0120G	Parallel Pin - 3x12	
107	0633 0140G	Parallel Pin - 3x14	
108	0720 0060B	Retaining Ring - M6	
109	0720 0040B	Retaining Ring - M4	
110	0414 0082B	Binding Self Tapping Screw - M4x8	
111	0313 0100B	Philips Pan Head Screw - M3x10	

8. SHIFT TRAY SECTION (A379)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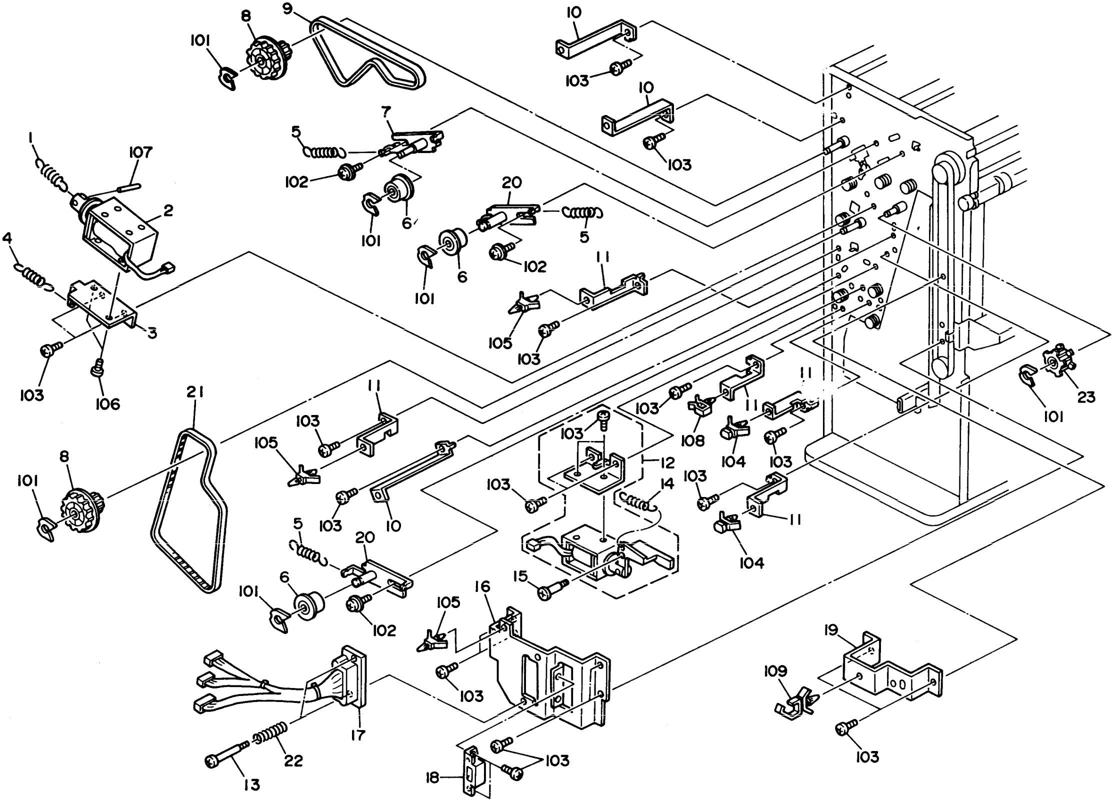
8. SHIFT TRAY SECTION (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A379 6161	Front Supporting Cover	1
2	A379 3133	Switch Lever	1
3	A379 3132	Switch Bracket	1
4	A353 3231	Bushing-4x6x9mm	1
5	A379 3141	End Fence	1
6	A379 3111	Shift Tray Guide	2
7	A379 3131	Exit Roller Cover	1
8	A379 3121	Exit Stay	2
9	A379 3351	Safety Switch Bracket	1
10	A379 3341	Shift Tray Holder	1
11	A379 3711	Timing Belt Stopper	2
12	A379 3321	Rear Shift Guide	1
13	A379 3331	Shift Tray Base	1
14	A353 3271	Tray Shift Shaft	2
15	AA13 2024	Spacer-M6	5
16	A353 3272	Guide Roller	4
17	A379 3311	Front Shift Guide	1
18	A379 3191	End Fence Cover	2
20	A353 3341	Shift Drive Cam	2
21	A379 5718	Upper Limit Sensor Harness	1
22	A353 3151	Tighter Bracket	2
23	A379 3811	Shift Drive Bracket	1
24	A353 3346	Shift Drive Shaft	1
25	AX05 0055	DC Motor -DC 9W	1
26	AW02 0049	Photointerruptor - OS - 580213-703	3
27	A353 3347	Shift Sensor Bracket	1
28	A379 5717	Shift Sensor Harness	1
29	C101 1327	Timing Belt - PX146P2M	1
30	AB03 0381	Timing Pulley -262	1
31	A379 3316	Shift Guide Roller	4
32	AB03 0376	Timing Pulley -302	2

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0313 0060B	Philips Pan Head Screw - M3x6	
103	0720 0040B	Retaining Ring - M4	
104	0806 5019	Timing Belt - 1005XL	
105	0951 4006B	Philips Screw With Washer- M4x6	
106	0720 0060B	Retaining Ring - M6	
107	1105 0200	Clamp	
108	1105 0283	Clamp	
109	1204 1081	Microswitch	
110	0314 0120B	Philips Pan Head Screw - M4x12	

9. DRIVE AND ELECTRICAL SECTION 1 (A379)



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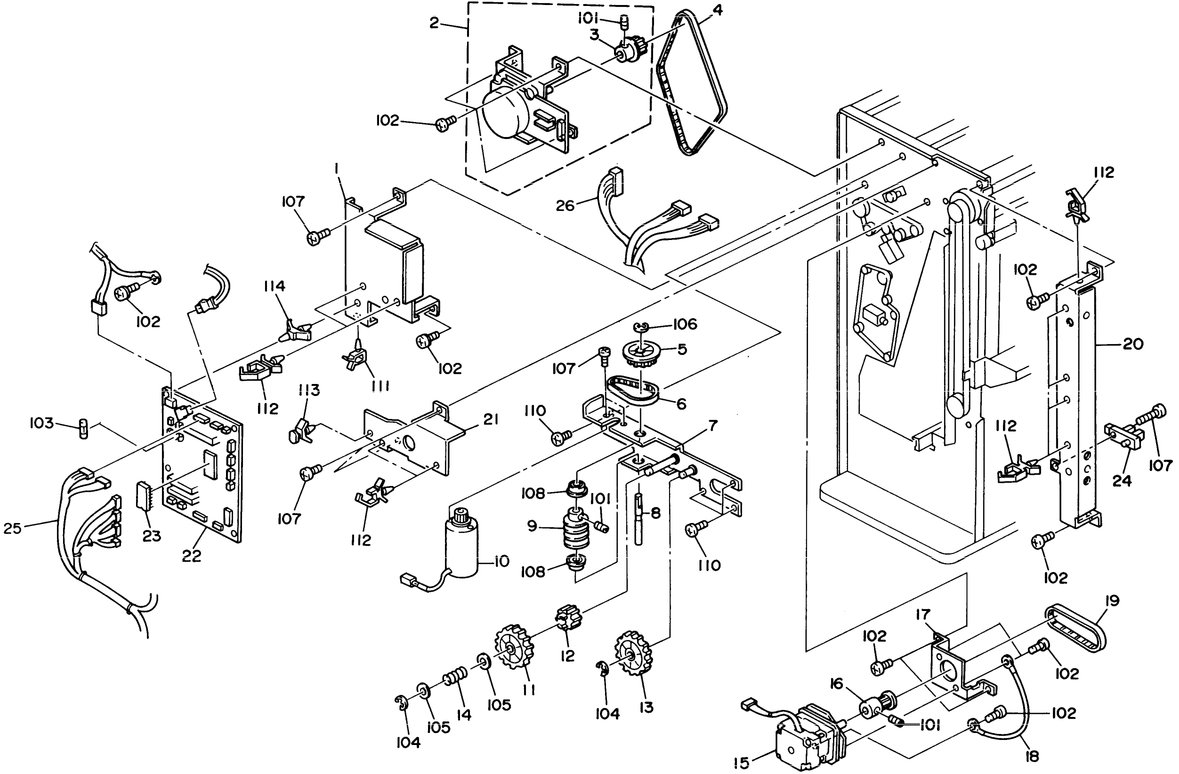
9. DRIVE AND ELECTRICAL SECTION 1 (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	C101 2445	Presuer Spring	1
2	AX10 0021	Junction Gate Solenoid	1
3	A379 2715	Solenoid Bracket	1
4	5940 2641	Feed-in Solenoid Spring	1
5	AA06 0092	Release Spring	3
6	AB03 0455	Tightener Pulley - 8X20X13	3
7	A379 1621	Tightener	1
8	AB03 3060	Timing Pulley - 18/33Z	2
9	AA04 3237	Timing Belt - B40S3M483	1
10	A379 6225	Cover Angle	3
11	A300 3151	Support Bracket	5
12	A379 2820	Positioning Roller Solenoid	1
13	5446 5832	Connector Guide Pin	2
14	A300 3865	Release Spring	1
15	A300 3858	Stepped Screw - M4	1
16	A379 1171	Lower Joint Bracket	1
17	A379 5714	Stapler Main Harness	1
18	AG07 0004	Magnetic Catch	5
19	A379 1172	Upper Joint Bracket	1
20	A377 2221	Tightener	2
21	AA04 3236	Timing Belt - B40S3M600	1
22	AA06 3068	Spring Connector	2
23	AB03 0278	Idler -202	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0805 0088	Retaining Ring - M6	
102	0951 4006B	Philips Screw With Washer - M4x6	
103	0314 0060B	Philips Pan Head Screw - M4x6	
104	1106 0383	Supportor - P.C.B.	
105	1105 0159	Pcb Stud	
106	0313 0050B	Philips Pan Head Screw- M3x5	
107	0623 0120E	Spring Pin - M3x12	
108	1105 0200	Clamp	
109	1105 0310	Wire Clamp	

10. DRIVE AND ELECTRICAL SECTION 2 (A379)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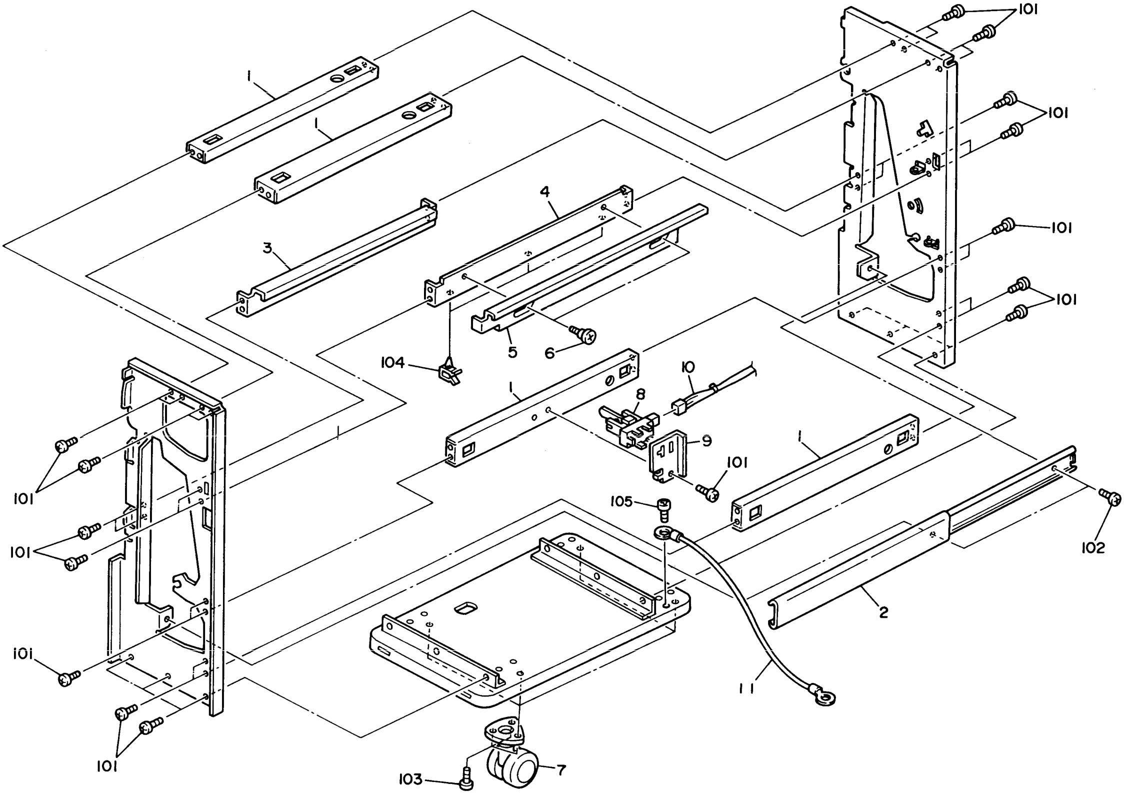
10. DRIVE AND ELECTRICAL SECTION 2 (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A379 5912	I/F Cover	1
2	A379 1610	Main Motor - DC 15W	1
3	AB03 0454	Timing Pulley - 20Z	1
4	AA04 3361	Timing Belt - B40S3M633	1
5	AB03 0223	Pulley - 48Z	1
6	AA04 3054	Timing Belt -142 P2M4	1
7	A379 3611	Lift Drive Bracket	1
8	A300 2726	Worm Gear Shaft	1
9	AB01 3709	Worm Gear	1
10	AX05 0058	DC Motor - 24V 9W	1
11	AB01 3809	Worm Wheel - 44z	1
12	AB01 3857	Gear-18Z	1
13	AB01 3710	Gear - 40Z	1
14	A353 3113	Pressure Spring	1
15	AX05 0057	Stepping Motor - DC24V 3.84W	1
16	AB03 0216	Pulley - 15Z	1
17	A379 1711	Motor Bracket	1
18	A379 5720	Grounging Harness	1
19	AA04 3238	Timing Belt - B40S2M206	1
20	A379 6321	Rear Supporting Cover	1
21	A379 5911	Upper Harness Bracket	1
22	A379 5601	Main Control Board	1
23	A379 5651	IC - AM27C256-200DC	1
24	AW02 0012	Photointerruptor	1
25	A379 5713	I/F harness	1
26	A379 5711	Main Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0574 0040E	Hexagon Headless Set Screw - M4x4	
102	0314 0060B	Philips Pan Head Screw - M4x6	
103	1107 0752	Fuse - 5A 250V	
104	0720 0060B	Retaining Ring - M6	
105	0807 5056	Washer -8.1 mm	
106	0720 0040B	Retaining Ring - M4	
107	0313 0060B	Philips Pan Head Screw - M3x6	
108	0741 3506	Ball Bearing - 6x12x4 mm	
109	0314 0080B	Philips Pan Head Screw - M4x8	
110	0313 0050B	Philips Pan Head Screw - M3x5	
111	1105 0291	Wire Saddle	
112	1105 0310	Wire Clamp	
113	1106 0383	Supportor - P.C.B.	
114	1105 0159	Pcb Stud	

11. FRAME SECTION (A379)



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11. FRAME SECTION (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A379 1141	Right Stay	4
2	AA07 0024	Slide Rail	1
3	A379 1161	Left Stay	1
4	A379 1311	Joint Stay	1
5	A377 1182	Joint Lever	1
6	5413 1882	Stepped Screw	2
7	AH01 2010	Caster - 50m	4
8	AW02 0049	Photointerruptor - OS - 580213-703	3
9	A379 2441	Exit Sensor Bracket	1
10	A379 5714	Stapler Main Harness	1
11	A377 5495	Grounding Harness	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0314 0060B	Philips Pan Head Screw - M4x6	
102	0344 0060F	Philips Truss Head Screw - M4x6	
103	0315 0080B	Philips Pan Head Screw - M5x8	
104	1105 0200	Clamp	
105	0950 4008B	Philips Screw With Spring Washer- M4x8	

12. MAIN BOARD (A379)

CAPACITOR

SYMBOL NO.	INDEX NO.
C 1	150
C 2	151
C 3	146
C 4	156
C 5	156
C 6	151
C 7	147
C 8	148
C 9	151
C10	151

SYMBOL NO.	INDEX NO.
C11	151
C12	149
C13	154
C14	152
C15	154
C16	152
C17	152
C18	154
C19	152
C20	152

SYMBOL NO.	INDEX NO.
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C22	152
C23	152
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C29	152
C30	154

SYMBOL NO.	INDEX NO.
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C40	152

SYMBOL NO.	INDEX NO.
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SYMBOL NO.	INDEX NO.
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C57	152
C58	152
C59	152
C60	154

SYMBOL NO.	INDEX NO.
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C63	152
C64	152
C65	152
C66	152
C67	152
C68	152
C69	152
C70	179

SYMBOL NO.	INDEX NO.
C71	152
C72	152
C73	152
C74	152
C75	152
C76	180
C78	179

CONNECTOR

SYMBOL NO.	INDEX NO.
CN101	103
CN102	106
CN103	102
CN104	187
CN105	187
CN106	111
CN107	110
CN108	107
CN109	188
CN110	104

SYMBOL NO.	INDEX NO.
CN111	109
CN112	188
CN113	189
CN114	105
CN115	190
CN116	190

DI

SYMBOL NO.	INDEX NO.
D101	186
D102	186

FUSE

SYMBOL NO.	INDEX NO.
FUSE1	114
(Socket)	112

DIODE

SYMBOL NO.	INDEX NO.
D1	123
D2	121
D3	121
D4	121
D5	121

IC

SYMBOL NO.	INDEX NO.
IC 1	
IC 2	
IC 3	
IC 4	
IC 5	132
IC 6	128
IC 7	125
IC 8	127
IC 9	141
IC10	139

SYMBOL NO.	INDEX NO.
IC11	1
(Socket)	113
IC12	135
IC13	131
IC14	135
IC15	138
IC16	137
IC17	129
IC18	130
IC19	134
IC20	130

12. MAIN BOARD (A379)

IC

SYMBOL NO.	INDEX NO.
IC21	126
IC22	133

PC

SYMBOL NO.	INDEX NO.
PC1	124
PC2	124

LED

SYMBOL NO.	INDEX NO.
LED21	122
LED22	122

REG

SYMBOL NO.	INDEX NO.
REG1	136

RESISTOR

SYMBOL NO.	INDEX NO.
R 1	144
R 2	157
R 3	144
R 4	160
R 5	159
R 6	158
R 7	169
R 8	169
R 9	169
R10	168

SYMBOL NO.	INDEX NO.
R11	168
R12	168
R13	161
R14	173
R15	173
R17	173
R18	169
R19	168
R20	169

SYMBOL NO.	INDEX NO.
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R23	173
R24	172
R25	163
R26	163
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R29	173
R30	173

SYMBOL NO.	INDEX NO.
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SYMBOL NO.	INDEX NO.
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SYMBOL NO.	INDEX NO.
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R67	162
R68	169
R69	171
R70	171

SYMBOL NO.	INDEX NO.
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R72	168
R73	168
R74	163
R75	163
R76	168
R77	168
R78	168
R79	168
R80	168

SYMBOL NO.	INDEX NO.
R81	168
R82	168
R83	169
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R89	169
R90	173

SYMBOL NO.	INDEX NO.
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R 94	161
R 95	169
R 96	168
R 97	173
R 98	173
R 99	169
R100	168

SYMBOL NO.	INDEX NO.
R101	175
R102	178
R103	173
R104	173
R105	173
R106	173
R107	162
R108	162
R109	162
R110	162

SYMBOL NO.	INDEX NO.
R111	168
R112	169
R113	178
R114	176
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R117	168
R118	173
R119	161
R120	163

12. MAIN BOARD (A379)

SYMBOL NO.	INDEX NO.
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R124	163
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R129	167
R130	173

SYMBOL NO.	INDEX NO.
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R140	164

SYMBOL NO.	INDEX NO.
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R142	166
R143	168
R144	169
R145	164
R147	164
R148	173
R150	167

SYMBOL NO.	INDEX NO.
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R159	175
R160	165

SYMBOL NO.	INDEX NO.
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R169	162
R170	173

SYMBOL NO.	INDEX NO.
R171	163
R172	181
R173	167
R175	182
R176	182
R177	161
R178	183
R179	183
R180	183
R181	183

SW

SYMBOL NO.	INDEX NO.
SN101	115
SN102	115

TEST POINT

SYMBOL NO.	INDEX NO.
TP3	101

TRANSISTOR

SYMBOL NO.	INDEX NO.
Q1	116
Q2	116
Q3	118
Q4	120
Q5	119
Q7	117
Q8	116

VR

SYMBOL NO.	INDEX NO.
VR1	145

XTL

SYMBOL NO.	INDEX NO.
XTL1	142
XTL2	143

12. MAIN BOARD (A379)

Index No.	Part No.	Description	Q'ty Per Assembly
*	A379 5601	Main Control Board	1
1	A379 5651	IC - AM27C256-200DC	1
2	A377 5150	IC - TC110G03AF-0071	1

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102	1102 0958	Connector - 2P	
103	1102 1048	Pin Housing - Mate-n-lock - 3P	
104	1102 4205	CT Header-6P	
105	1102 4211	CT Header- 12P	
106	1102 5003	Connector - 2P	
107	1102 5345	Connector - 18P	
108	1103 1768	Connector - 2P	
109	1103 1771	Connector - 5P	
110	1103 1772	Pin Header - 6P	
111	1103 1778	Pin Header - 12P	
112	1104 0333	Fuse Holder	
113	1104 0413	Connector - 28P	
114	1107 0752	Fuse - 5A 250V	
115	1204 1385	Push Switch	
116	1400 0072	Transistor - 2SC372Y	
117	1400 0423	Transistor - 2SA1121C	
118	1400 0486	Transistor - 2SA1020	
119	1401 0200	Transistor - 2SD633	
120	1401 0282	Transistor - 2SB1020	
121	1402 0780	Diode -11ES2	
122	1402 0783	Red LED - GL3PR8	
123	1402 0874	Diode - RL2Z	
124	1403 0519	Photocoupler - TLP621	
125	1407 1882	IC - 74LS373	
126	1407 2054	IC - TD62308F	
127	1407 2057	IC - 82C55AFP-5	
128	1407 2058	IC - 82C54FP-6	
129	1407 2089	IC - TC4024BF	
130	1407 2218	IC - SN74LS06NS	
131	1407 3321	IC - MC74HC00AF	
132	1407 3492	CPU -78C10AGF	
133	1407 4145	IC - HD74LS07PF	
134	1408 0397	Comparator - NJM2901M	
135	1408 0398	IC - NJ2903M	

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137	1408 0598	Ic - MB3773PF	
138	1408 0599	Ic - M51971EP	
139	1408 0827	IC - TA8429H	
140	1408 1050	IC - STK6712 BMK4	
141	1408 0840	IC - HR052	
142	1503 0333	Ceramic Oscillator - 6.0mg	
143	1503 0347	Oscillator - 12MHz	
144	1600 1354	Resistor Array -1K OHM 1W	
145	1601 8148	Variable Resistor - 20K OHM 0.5W	
146	1604 1360	Capacitor - 3300μF 10V	
147	1604 1378	Capacitor - 1μF 50V	
148	1604 1380	Capacitor - 3.3μF 50V	
149	1604 1382	Capacitor - 10μF 50V	
150	1604 1390	Capacitor - 1000μF 50V	
151	1604 2563	Capacitor - 100μF 50V	
152	1605 0216	Capacitor - 0.01μF	
153	1605 0326	Capacitor - 0.33μF	
154	1605 0636	Capacitor - 0.1μF	
155	1606 1208	Capacitor - 100PF ±5% 50V	
156	1606 1348	Capacitor - 0.02μF 50V	
157	1611 4121	Resistor -120 OHM 1/4T ±5%	
158	1611 4151	Resistor -150 OHM 1/4W ±5%	
159	1611 4241	Resistor -240 OHM 1/4W	
160	1611 4330	Resistor -330 OHM 1/4T ±5%	
161	1630 3101	Resistor - 100 OHM - 1/10W	
162	1630 3102	Resistor -1K OHM 1/10W ±5%	
163	1630 3103	Resistor - 10K OHM 1/10W ±5%	
164	1630 3152	Resistor - 1.5K OHM - 1/10W	
165	1630 3201	Resistor -200 OHM 1/10W ±5%	
166	1630 3202	Resistor - 2K OHM -1/10W	
167	1630 3222	Resistor - 2.2K OHM 1/10W ±5%	
168	1630 3223	Resistor - 22K OHM - 1/10W	
169	1630 3302	Resistor - 3K OHM - 1/10W	
170	1630 3333	Resistor - 33K OHM ±5% 1/10W	

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172	1630 3470	Resistor - 47 OHM 1/10W ±5%	
173	1630 3472	Resistor - 4.7K OHM 1/10W ±5%	
174	1630 3473	Resistor - 47K OHM 1/10W ±5%	
175	1630 3511	Resistor - 510 OHM 1/10W ±5%	
176	1630 3562	Resistor - 5.6K OHM ±5% 1/10W	
177	1630 3753	Resistor - 75K OHM - 1/10W	
178	1630 3822	Resistor - 8.2K OHM 1/10W ±5%	
179	1606 1136	Capacitor - 1000PF	
180	1605 0288	Capacitor - 4700PF ±5%	
181	1630 3821	Resistor - 820 OHM 1/10W	
182	1630 3560	Resistor - 56 OHM ±5% 1/10W	
183	1630 3330	Resistor - 33 OHM ±5% 1/10W	
184	1630 3431	Resistor - 430 OHM ±5% 1/10W	
185	1630 3682	Resistor - 6.8K OHM 1/10W	
186	1204 1422	Dip Switch -51D-0401	
187	1102 4202	Connector - 3P	
188	1102 4206	Connector - 7P	
189	1102 4208	Connector - 9P	
190	1102 4201	Connector - 2P	

13. DECAL AND DOCUMENT (A379)

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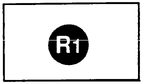

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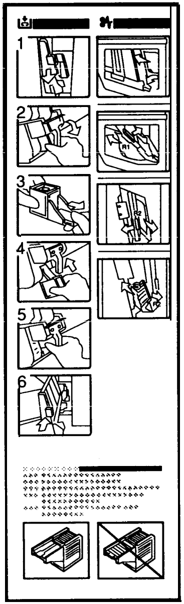
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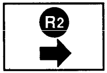

13. DECAL AND DOCUMENT (A379)

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ST24 (A374)

This parts catalog includes MB No1.

PARTS CATALOG

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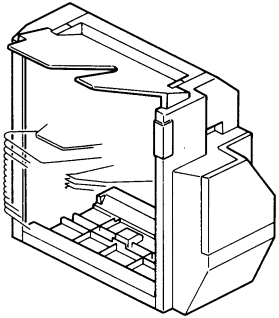
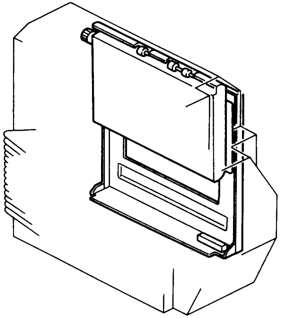
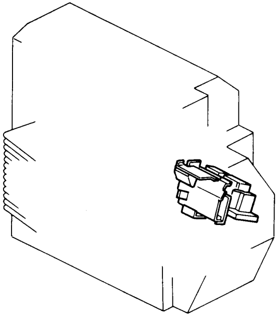
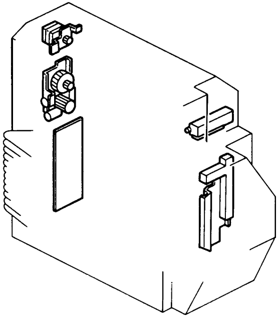
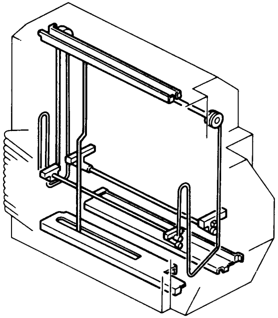
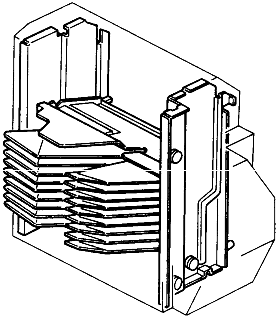
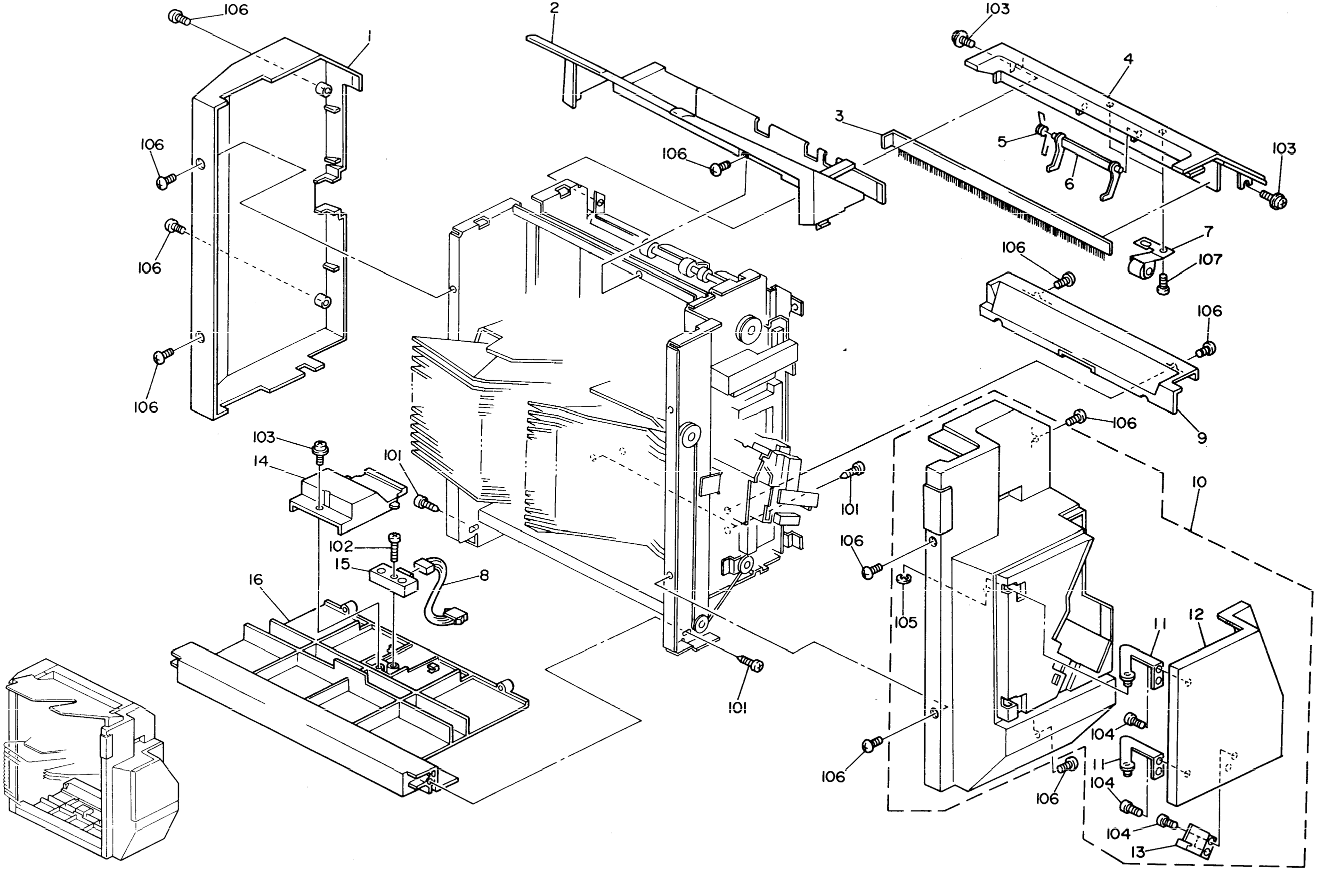
LOCATION OF UNIT

1. EXTERIOR (A374)  See Page 4	2. TRANSPORT SECTION (A374)  See Page 6	3. STAPLE SECTION (A374)  See Page 8
4. DRIVE AND ELECTRICAL SECTION (A374)  See Page 10	5. FRAME SECTION (A374)  See Page 12	6. COPY TRAY SECTION (A374)  See Page 14

1. EXTERIOR (A374)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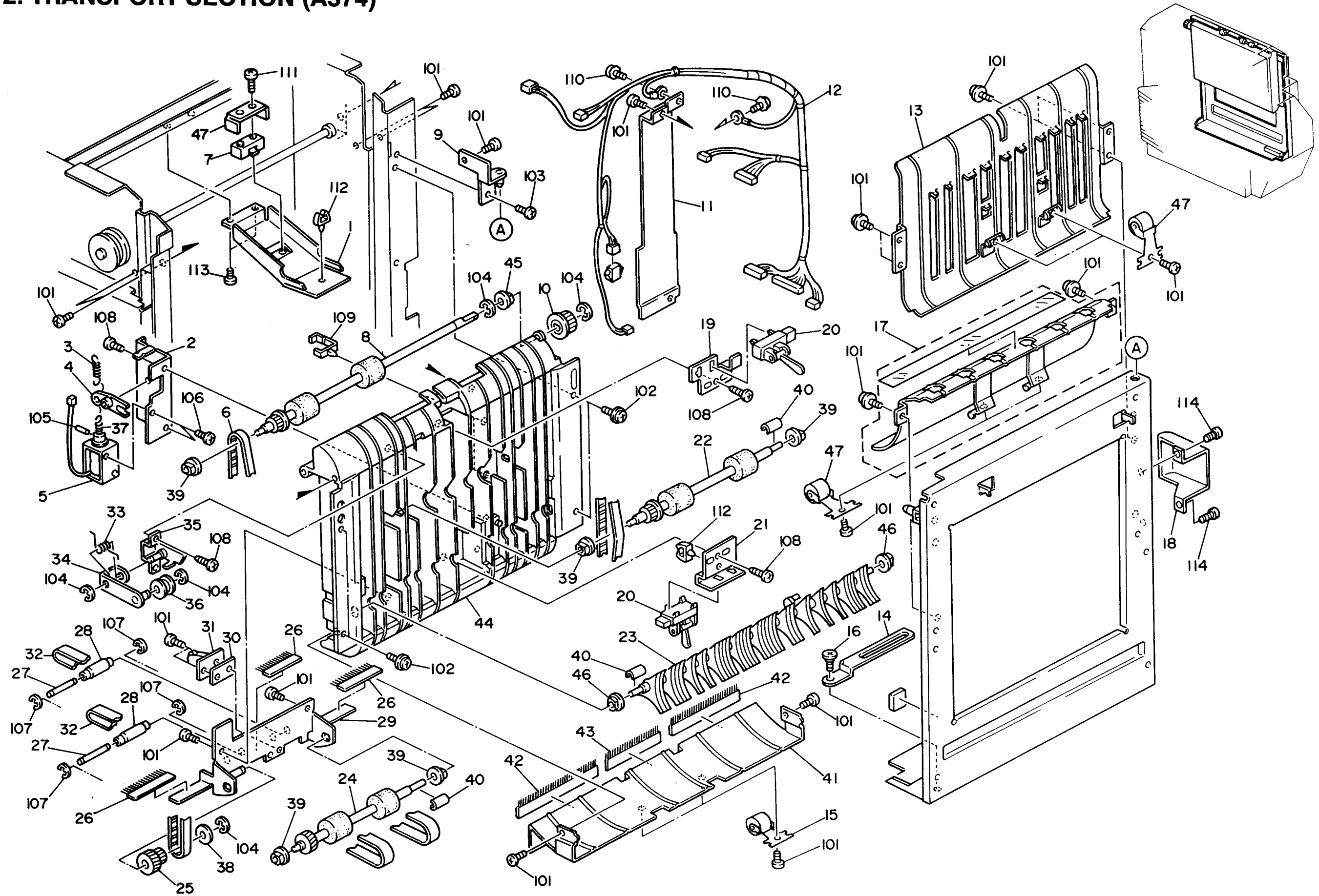
1. EXTERIOR (A374)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A374 1541	Rear Cover	1
2	A374 1571	Proof Tray	1
3	AA12 0055	Antistatic Brush - 367mm	1
4	A374 1561	Upper Cover	1
5	AA06 6198	Proof Lever Spring	1
6	A374 2251	Proof Lever	1
7	A374 2141	Plate Spring - Upper Cover	2
8	A374 5250	Relay Harness - Bin Sensor	1
9	A374 1591	Lower Harness Cover	1
10	A374 1600	Front Cover Ass'y	1
11	A374 1611	Hinge - Front Cover Cap	2
12	A374 1531	Front Cover Cap	1
13	A374 4556	Safety Switch Actuator	1
14	A374 3570	Sensor Cover	1
15	AW02 0025	Lower Bin/jam Sensor	1
16	A374 1511	Bottom Cover	1
17	A498 1831	Staple Position Decal MB1 (ADDED)	1
18	A374 1861	Decal - Misfeed Removal MB1 (ADDED)	1
19	A374 1871	Decal - Staple Misfeed MB1 (ADDED)	1
20	A374 1881	Decal - Add Staple MB1 (ADDED)	1
21	A374 1855	Decal - Staple Position MB1 (ADDED)	1

Index No.	Part No.	Description	Q'ty Per Assembly
101	0434 0062B	Tapping Screw M4x6	
102	0313 0160B	Philips Pan Head Screw - M3x16	
103	0951 4008B	Philips Screw With Washer - M4x8	
104	0434 0060B	Philips Tapping Screw - M4x6	
105	0720 0040E	Retaining Ring - M4	
106	0344 0060F	Philips Truss Head Screw - M4x6	
107	0434 0084B	Tapping Screw - M4x8	

2. TRANSPORT SECTION (A374)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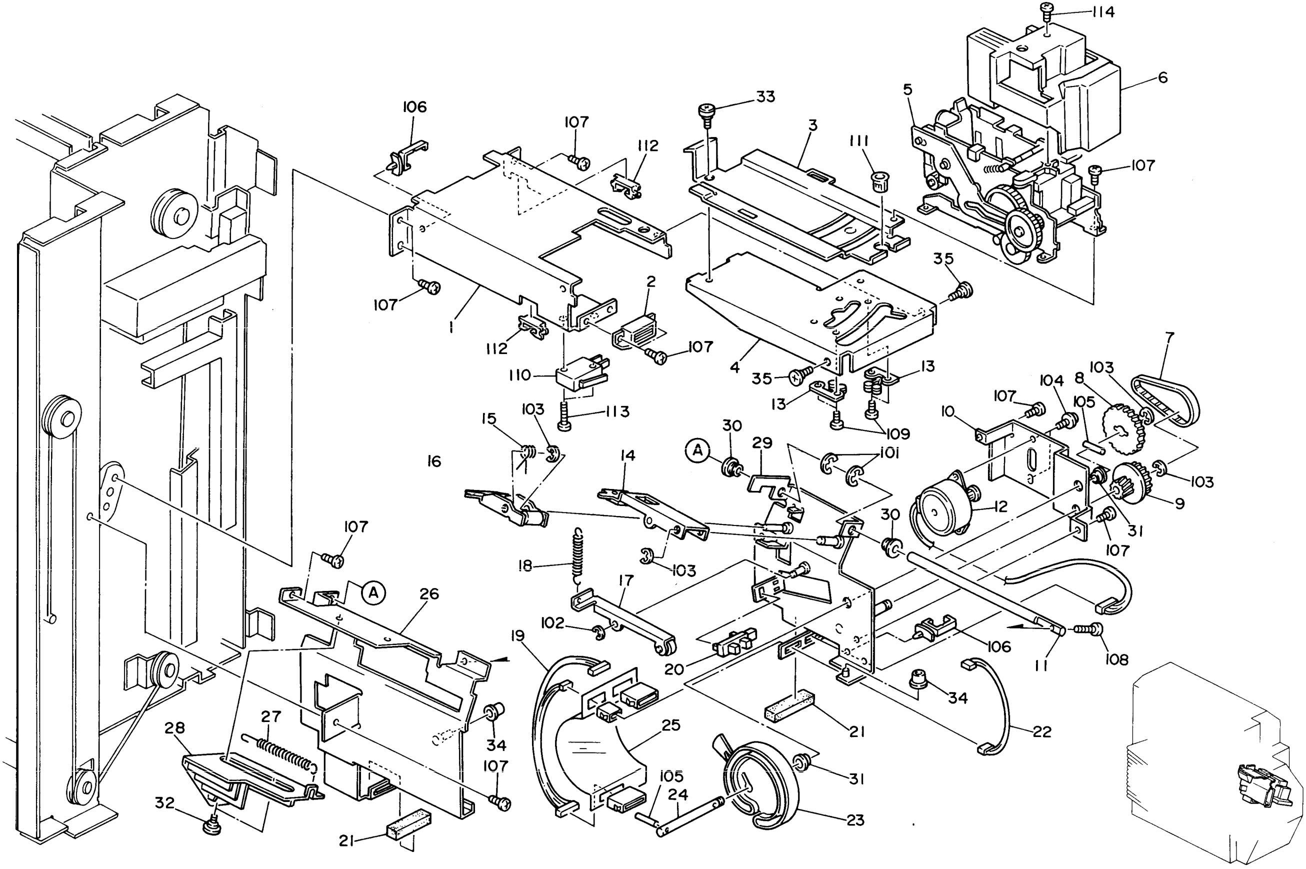
2. TRANSPORT SECTION (A374)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A374 3560	Large Cover - Upper Sensor	1
2	A374 2155	Transport Solenoid Bracket	1
3	AA06 0488	Spring - Junction Gate	1
4	A374 2168	Solenoid Lever	1
5	AX11 0035	Solenoid - 24v 4.6w	1
6	AA04 3201	Timing Belt - 280XL	1
7	AW02 0026	Upper Bin/jam Sensor	1
8	AF02 0270	Upper Exit Roller	1
9	A374 1191	Upper Hinge	1
10	AB03 0387	Pulley - 34Z	1
11	A374 2152	Upper Transport Bracket	1
12	A374 5230	Transport Harness	1
13	A374 2121	Entrance Guide Plate - Upper	1
14	A374 1146	Lower Stopper	1
15	A374 2163	Spring Plate - Lower Transport MB1	2
16	52011796	Stepped Screw - M4	1
17	A374 2131	Entrance Guide Plate - Lower	1
18	A374 1551	Harness Cover	1
19	A374 2182	Bracket - Upper Exit Sensor	1
20	AW02 0049	Photointerruptor - OS - 580213-703	2
21	A374 2183	Bracket - Lower Exit Sensor	1
22	AF02 0272	Relay Roller	1
23	A374 2161	Junction Pawl	1
24	AF02 0271	Lower Exit Roller	1
25	AB01 7273	Sprocket/gear - 16/20Z	1
26	AA12 0054	Antistatic Brush - 50mm	3
27	A374 2548	Exit Roller Shaft	2
28	A374 2546	Exit Roller	2
29	A374 2154	Transport Unit Bracket	1
30	A374 3562	Small Cover - Upper Sensor	1
31	A374 2331	Bin Supportor	1
32	A374 2547	Exit Belt	2
33	AA06 6196	Tension Spring	1
34	A374 2200	Tension Arm	1
35	A374 2190	Tightener Bracket	1

Index No.	Part No.	Description	Q'ty Per Assembly
36	A374 2207	Pullev - 12M	1
37	AA06 0489	Spring - Solenoid	1
38	A374 2186	Flange - 16Z/20T	1
39	AA08 0141	Bushing - 5x12x4mm	5
40	A374 2181	Spacer	3
41	A374 2135	Lower Guide Plate Ass'y	1
42	AA12 0053	Antistatic Brush - 112mm	2
43	AA12 0052	Antistatic Brush - 62mm	1
44	A374 2151	Vertical Paper Guide	1
45	AA08 0071	Bushing -6X10X6	1
46	H014 2131	Bushing - M4	2
47	A374 2140	Guide Roller MB1 (ADDED)	4
101	0434 0060B	Philips Tapping Screw - M4x6	
102	0951 4008B	Philips Screw Wtih Washer- M4x8	
103	0314 0080B	Philips Pan Head Screw - M4x8	
104	0720 0040E	Retaining Ring - M4	
105	0623 0100E	Spring Pin - 3x10mm	
106	0313 0040B	Philips Pan Head Screw - M3x4	
107	0720 0030E	Retaining Ring - M3	
108	0434 0062B	Tapping Screw M4x6	
109	1105 0291	Wire Saddle	
110	0953 4008M	Screw - M4x8	
111	0313 0160B	Philips Pan Head Screw - M3x16	
112	1105 0234	Clamp	
113	0314 0040B	Philips Pan Head Screw - M4x4	
114	0344 0060F	Philips Truss Head Screw - M4x6	

3. STAPLE SECTION (A374)



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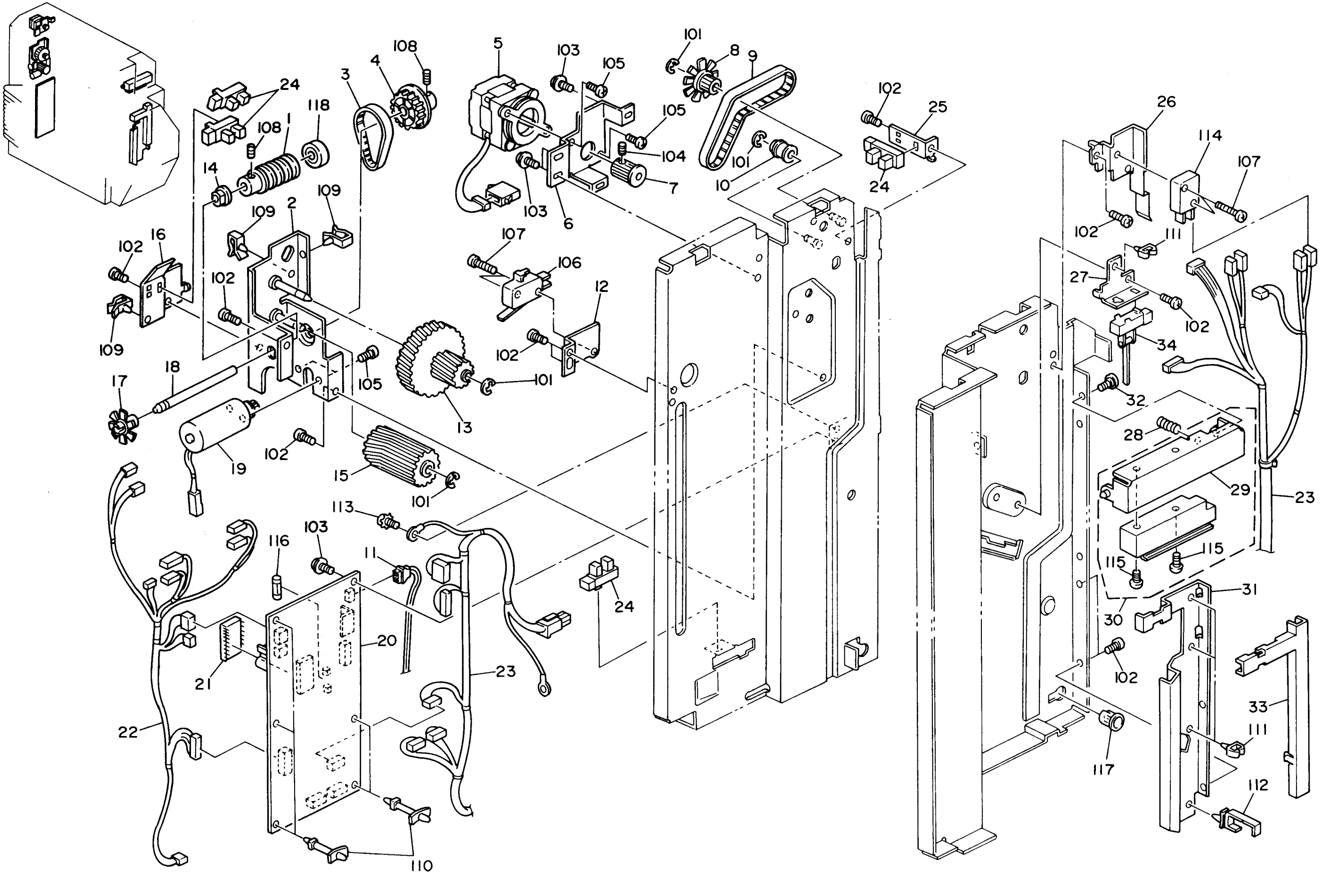
3. STAPLE SECTION (A374)

Index No.	Part No.	Description	Q'ty Per Assembly
1	A374 4521	Stapler Bracket	1
2	5054 0536	Magnet Catch Ass'y	1
3	A374 4531	Stapler Plate	1
4	A374 4522	Stapler Rotation Bracket	1
5	AJ01 1005	Stapler Unit	1
6	A374 4551	Stapler Cover	1
7	AA04 3205	Timing Belt - 83XL	1
8	AB01 1142	Gear -592	1
9	AB01 7275	Coupled Gear - 20/482	1
10	A374 4631	Small Side Plate	1
11	A374 4681	Gripper Shaft	1
12	AX04 0056	Stepping Motor - DC9.5V 9.0W	1
13	5409 1238	Rotary Catch	2
14	A374 4651	Upper Gripper Arm	1
15	AA06 6197	Lower Pawl Spring	1
16	A374 4656	Lower Gripper Arm	1
17	A374 4641	Cam Follower	1
18	AA06 0491	Upper Pawl Spring	1
19	A374 5210	Gripper Harness	1
20	AW02 0021	Photointerruptor - 175487-3	1
21	A374 4688	Gripper Connector Cushion	2
22	A374 5220	Gripper Relay Harness	1
23	A374 4666	Drive Cam	1
24	A374 4636	Drive Shaft	1
25	A374 4686	Connector Holder	1
26	A374 4611	Gripper Bracket	1
27	AA06 0492	Jogger Stopper Spring	1
28	A374 4616	Jogger Stopper	1
29	A374 4621	Large Side Plate	1
30	AA08 2042	Bushing - 6x10x6.5mm	2
31	AA08 0072	Bushing - 6x10X3	2
32	5201 1796	Stepped Screw - M4	2
33	AA14 3062	Shoulder Screw - M4	1
34	AA08 0074	Bushing - 4x6x6	2
35	5442 1659	Stepped Screw - M4	2
101	0720 0080E	Retaining Ring - M8	
102	0720 0025E	Retaining Ring - M2.5	
103	0720 0040E	Retaining Ring - M4	
104	0951 3006B	Philips Screw With Washer- M4x6	
105	0632 0140G	Parallel Pin	
106	1105 0310	Wire Clamp	
107	0434 0060B	Philips Tapping Screw - M4x6	
108	0313 0080B	Philips Pan Head Screw - M3x8	
109	0313 0050B	Philips Pan Head Screw - M3x5	
110	1204 2188	Interlock Switch	
111	1106 0241	Bushing - 6.7mm	
112	1105 0234	Clamp	
113	0313 0140B	Philips Pan Head Screw - M3x14	
114	0413 0084W	Tapping Screw M3x8	

4. DRIVE AND ELECTRICAL SECTION (A374)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4. DRIVE AND ELECTRICAL SECTION (A374)

Index No.	Part No.	Description	Q'ty Per Assembly
1	AB01 3709	Worm Gear	1
2	A374 3111	Bin Drive Bracket	1
3	AA04 3203	Timing Belt - 77XL	1
4	AB03 0399	Pulley - 52Z	1
5	AX05 0057	Stepping Motor - DC 24V 3.84W	1
6	A374 2237	Stepping Motor Bracket	1
7	AB03 0386	Pulley - 40Z	1
8	A374 2216	Encoder	1
9	AA04 3202	Timing Belt - 145XL	1
10	A374 2218	Pulley - 12M	1
11	AW03 0028	Fiber Cable	1
12	A374 3187	Limit Switch Bracket -Upper	1
13	AB01 3731	Gear-54Z	1
14	5053 0447	Bushing-6mm	2
15	AB01 3730	Gear - 18Z	1
16	A374 3126	Bin Sensor Bracket	1
17	A374 3115	Encoder Disk	1
18	A374 3120	Worm Gear Shaft	1
19	AX05 0058	DC Motor-24V9W	1
20	A374 5100	Main Control Board	1
21	A374 5103	IC - AM27C256-205DC	1
22	A374 5240	Bin Sensor Harness	1
23	A374 5200	Main Harness	1
24	AW02 0021	Photointerruptor - 175487-3	4
25	A374 2234	Encoder Sensor Bracket	1
26	A374 1195	Door Switch Bracket	1
27	A374 4711	Gripper Sensor Bracket	1
28	AA06 3239	Spring - Handle	1
29	A374 1625	Opening Handle Bracket	1
30	A374 1700	Opening Handle Ass'y	1
31	A374 1622	Bin Shaft Cover - Front	1
32	AA14 3306	Stepped Screw - M6	1
33	A374 1623	Harness Cover	1
34	A374 5600	Photointerrupter - OS-580213-704	1

Index No.	Part No.	Description	Q'ty Per Assembly
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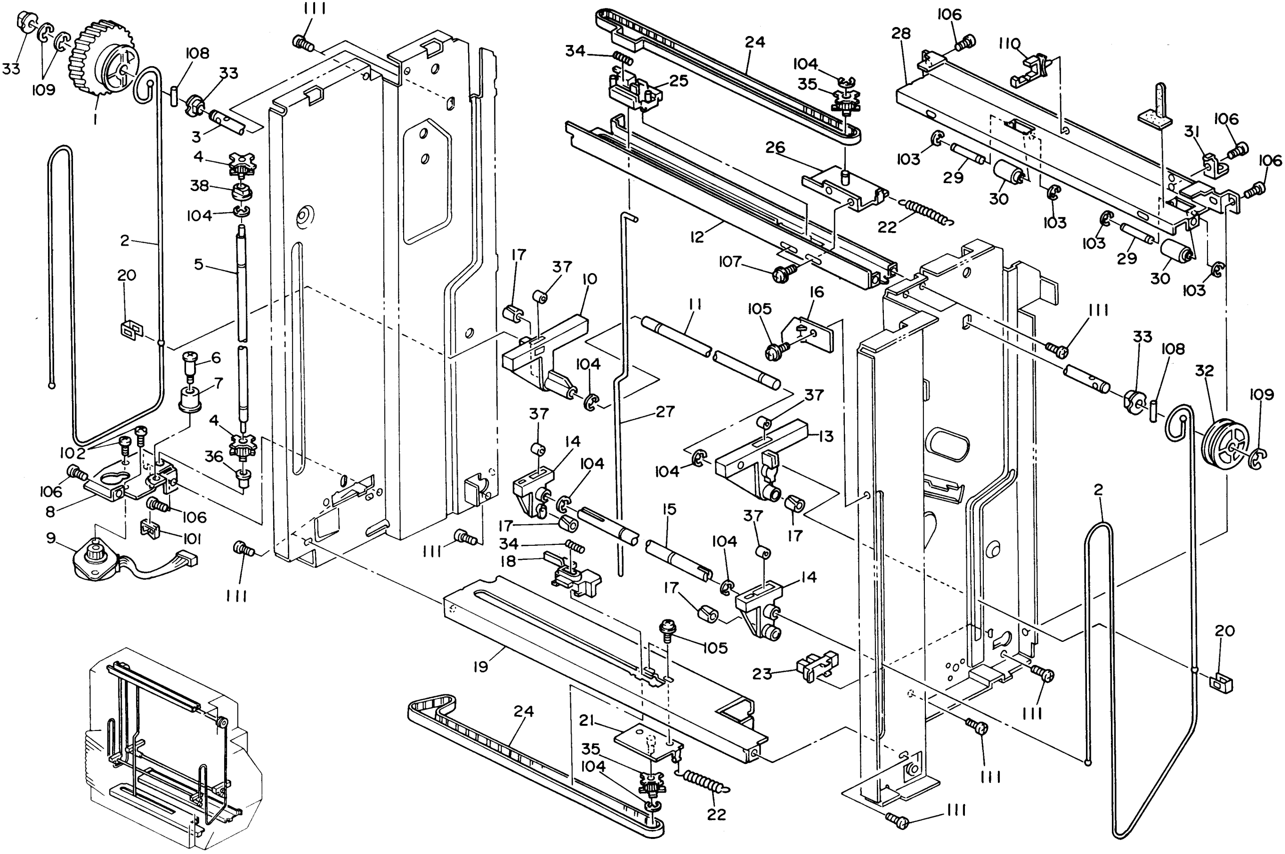
102	0434 0060B	Philips Tapping Screw - M4x6	
103	0951 4006B	Philips Screw With Washer - M4x6	
104	0574 0030E	Hexagonal Set Screw - M4x3	
105	0313 0050B	Philips Pan Head Screw - M3x5	
106	1204 2233	Microswitch -AH715254N	
107	0313 0140B	Philips Pan Head Screw - M3x14	
108	0574 0040E	Hexagon Headless Set Screw - M4x4	
109	1105 0267	Wire Clamp	
110	1105 0163	Locking Support	
111	1105 0234	Clamp	
112	1105 0291	Wire Saddle	
113	0953 4008M	Screw - M4x8	
114	1204 2188	Interlock Switch	
115	0344 0060F	Philips Truss Head Screw - M4x6	
116	1107 0748	Fuse - 2A, 250V	
117	1106 0241	Bushing - 6.7mm	
118	0740 3206	Ball Bearing	

5. FRAME SECTION (A374)



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5. FRAME SECTION (A374)

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2	AA05 0076	Bin Drive Wire	2
3	A374 3131	Wire Lift Shaft	1
4	AB03 0389	Pulley- 16Z	2
5	A374 4124	Jogger Drive Shaft	1
6	A469 3175	Idle Pulley Stud - Short	1
7	5887 4185	Idler Pulley	1
8	A374 4141	Jogger Motor Bracket	1
9	AX04 0057	Stepping Motor - DC 24V 3.72W	1
10	A374 3146	Bin Support Block - Right Rear	1
11	A374 3160	Bin Block Shaft - Right	1
12	A374 1131	Upper Jogger Stay	1
13	A374 3142	Bin Support Block - Right Front	1
14	A374 3156	Bin Support Block - Left	1
15	A374 3163	Bin Block Shaft - Left	1
16	A374 4617	Small Jogger Stopper	1
17	A374 3525	Cam Roller	4
18	A374 4181	Jogger Lower Holder	1
19	A374 1132	Lower Jogger Stay	1
20	A374 3165	Bin Block Stopper	2
21	A374 4161	Lower Tension Bracket	1
22	A421 2521	Spring - Paper Volume	2
23	AW02 0021	Photointerruptor -175487-3	1
24	AA04 3204	Timing Belt -21 IXL	2
25	A374 4171	Upper Jogger Holder	1
26	A374 4151	Jogger Tension Bracket - Upper	1
27	A374 4131	Jogger Shaft	1
28	A374 1136	Lower Stay	1
29	A374 1142	Shaft - Lower Stay Roller	2
30	A374 1141	Lower Stay Roller	2
31	A374 1145	Lower Stay Bracket	1
32	AB03 2051	Wire Pulley - M26.5	1
33	5053 0419	Bushing - 10mm	3
34	AA06 3240	Jogger - Spring	2
35	AB03 0388	Pulley - 16Z	2

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37	A374 3521	Bin Roller	4
38	AA08 0142	Bushing - 5x10x4mm	1
101	1105 0234	Clamp	
102	0313 0050B	Philips Pan Head Screw - M3x5	
103	0720 0030E	Retaining Ring - M3	
104	0720 0040E	Retaining Ring - M4	
105	0951 4006B	Philips Screw With Washer - M4x6	
106	0434 0060B	Philips Tapping Screw - M4x6	
107	0951 4008B	Philips Screw With Washer - M4x8	
108	0633 0250G	Pin - M3x25	
109	0720 0080E	Retaining Ring - M8	
110	1105 0291	Wire Saddle	
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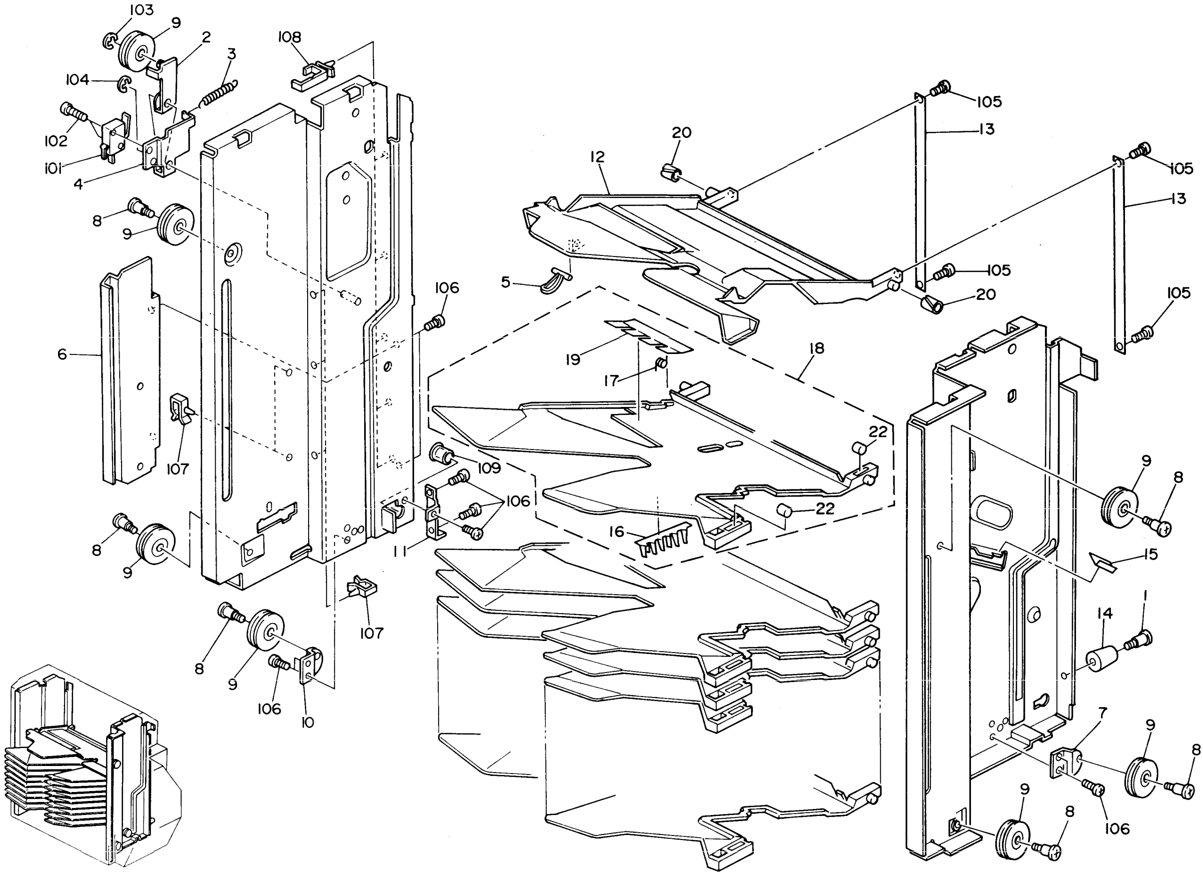
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4	A374 3196	Limit Switch Bracket - Lower	1
5	A374 3555	End Fence Ass'y	20
6	A374 1621	Bin Shaft Cover - Rear	1
7	A374 3176	Front Pulley Bracket	1
8	AA14 3404	Stepped Screw - M4	6
9	AB03 2052	Wire Pulley - M22.8	7
10	A374 3179	Rear Pulley Bracket	1
11	A374 1186	Lower Hinge	1
12	A374 3541	Support Tray	1
13	A374 3550	Bin Link	2
14	A374 1177	Lower Cushion	1
15	A374 4561	Stapler Guide	1
16	A374 3519	Pressuer Guide Mylar	20
17	AA06 6205	End Fence Spring	20
18	A374 3505	Bin Ass'y	20
19	A374 3515	Bin Guide Mylar	20
20	A374 3525	Cam Roller	44
22	A374 3521	Bin Roller	80

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102	0313 0140B	Philips Pan Head Screw - M3x14	
103	0720 0060E	Retaining Ring - M6	
104	0720 0040E	Retaining Ring - M4	
105	0313 0050B	Philips Pan Head Screw - M3x5	
106	0434 0060B	Philips Tapping Screw - M4x6	
107	1105 0267	Wire Clamp	
108	1105 0291	Wire Saddle	
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